NEWS SUMMARY

GENERAL

obstructs act on progress

A weekend of violence in which haphazard shelling of residential areas killed 20 people in Beirut left a disengagement plan for the war-ring milities in Lebanou and a Syr-ian-Lebanous. ian-Lebanese summit beyond reach. There was no political prog-

The Shifte Amal movement released a U.S. professor and a Frenchman who had been kid-napped in West Beirut in February.

Howe in Peking

British Foreign Minister Sir Geoffrey Howe meets his Chinese coun-terpart Wu Xueqian in Peking to-day for the first high-level talks on the future of Hong Kong for more. than 18 months, Page 29

Punjab railway fires Sikh extremists set fire to at least

34 railway stations in dawn raids. Premier Indira Gandhi called an emergency cabinet meeting. Page 3

Spain jails coloneis

A Spanish court martial cashiered three colonels and sentenced them to 12 years and a day in prison for plotting a bid to stop the 1982 general election. A fourth colonel was. acquitted. Page 3.

Berlin air protest

Britain, the U.S. and France protested to the Soviet Union about continuing restrictions on their flights in the three air corridors between West Germany and Berlin.

Soviet flight inquiry French military authorities have

begun an inquiry into a flight by a Soviet civilian airliner over a secret naval base near Toulon. Page 2

Supplies for Salyut Soviet Union launched an un-

manned spacecraft to take supplies and equipment to the orbiting Salyut-7 space station.

Paris killing

A man was killed and two wounded when a gumman opened fire at a Tunisian restaurant in Paris. Elsewhere in the city three petrol bombs were thrown at offices.

Peace women fined

Twelve women from six West European countries who obstructed building work at a cruise nuclear missile base in Sicily were fined L500,000 (5300) each. The prosecu-tor asked for light penalties be-cause they acted from "motives of high moral and social value." Their 20-day jail sentences were commut-

South Africa's poor

A South African study into poverty in rural areas, including the 10 tri-bal homelands, showed widespread hunger and deprivation. A third of black, coloured and Asian children under 14 were stunted by malnutri-

Lawyers' protest

More than 15,000 Bangladesh lawyers boycotted the courts to press for a quick end to military rule.

Frankfurt protest

Riot police used water cannoa against hundreds of young people protesting against the opening of a new runway at Frankfurt airport.Page 2

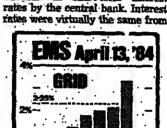
Philippines fast

Filipino opposition leader Butz Aquino, a former cabinet minister, and 25 others launched a week's fast to win support for the campaign to end the rule of President Ferdinand

Violence EEC will Lebanon Japanese bearings

EEC is to launch an inquiry into allegations of dumping of Japanese ball-bearings after pressure from European producers. Page 4

PHILIPPINES has imposed an additional 3 per cent duty, above the present 5 per cent, on non-exempt





lack of any clear trend in the mar-

The D-Mark was virtually un-changed in relation to its central rate and against the dollar. Conse-quently movements within the sys-

The chart shows the two constraints on European Monetary System exon the weakest currency in the sys-tem, defines the cross rates from which no currency (except the lira)
way move more than 2% per cent.
The lower chart gives each currency's divergence from its "central rate" against the European Currency Optic (ECU), itself a basket of European Currency Currency Currency Currency Currency Currency (ECU), itself a basket of European Currency (ECU))

BRITISH insurance companies had a total net investment to 55.8 m (59.7 hn) in their long-term funds in 1983, £9.5 hn up on 1982. Insurance

column, Page 14 RCA and Hitachi are to press on video disc system in the UK; despite BCA's recent decision to stop making players in the U.S. Page 6 MORGAN GRENFELL, the London

Iraq to buy non-military items.

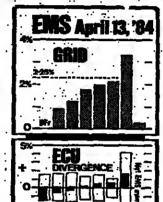
DOME PETROLEUM announced 1983 loss of C\$1.1bn (U.S.\$864m), a record annual loss for a Canadian

company. Page 22 tions group Mercury. Page 20

GAZ DE FRANCE is raising \$100m in the Eurocredit market, the first public borrowing since November by a French state operation. Page 21

component William Press. Page 9

BELGIAN franc slipped outside its divergence limit in the European Monetary System last week, but was not under any real pressure. This was underlined by two reductions in short-term interest



a month to a year, reflecting the

tem were confined to a narrow

with plans to promote the CED

merchant bank, is organising a £275m (\$392m) British credit for

NIPPON Telephone and Telegraph. Japanese state-owned, has announced a Y1,710km (\$7,660a) investment programme for the next year. Page 22

REUTERS, Britain's world news agency, withdrew from bidding for 20 per cent of private communica-

AMEC, the UK international civil engineering group, will reveal on Tuesday results of its worldwide investigation into the affairs of its

A 24-hour strike by IG Druck und Papier, the West German print union, at the Financial Times' contract printers in Frankfurt prevent ed the publication of Friday's international edition.

Moynihan quits committee over Reagan's Nicaragua policy BY REGINALD DALE IN WASHINGTON AND TIM COONE IN MANAGUA

PRESIDENT Ronald Reagan day announced his resignation as strongly defended his controversial vice chairman of the Senate Intelli-

doorstep".

Mr Reagan spoke as controversy over the U.S.'s own covert activity against Nicaragua, including Amer-ican-supervised mining of the com-try's ports, continued to reverberate through Washington.

Democratic Senator Daniel Patrick Moynihan of New York yester-

Central American policies at the gence Committee, accusing the adweekend by launching one of his ministration of a violation of trust sharpest attacks so far on the San- for not informing the committee

sharpest attacks so far on the Sandinists Government of Nicaragua.

After accusing Nicaragua of "covert aggression" against El Salvador and its other neighbours, Mr. Reagan said that the U.S. could not turn its back on "this crisis at our doorstep".

Mr. Reagan spoke as controversy throw the left-wing Sandinista Government.

Arde, based in Costa Rica, claimed that the town and garrison had been taken last Thursday after bitter fighting, including hand-to-hand combat, in which some 1,500 guerrillas had taken part.

U.S.-backed guerrillas had suc-ceeded in taking such a key military target in more than two years

Its capture would be a boost for President Reagan in his attempts to persuade Congress to approve a further \$21m in military aid for the Nicaraguan counter-revolutionaries. After Senator Moynihan an-

Democratic members insisted that they had known of the mining of the ports some time.

nounced his resignation from the committee, other Republican and

Mr William Casey, director of the Central Intelligence Agency, was reported to have told the committee five weeks ago, although only in a

It would be the first time that the single sentence of a two-hour brief-

Senator Edward Kennedy of Massachusetts, one of Mr Regan's leading opponents on Central Am-

Mrs Jeane Kirkpatrick, the U.S. ambassador to the United Nations, retorted that the minimum and ineffective."

weekly paid radio broadcast, Mr Reagan did not refer directly to the U.S.'s own covert campaign against Nices retorted that the mining was both legal and justified and that to cast Nicaragus in the role of victim was a "complete, Orwellian inversion" of

Mrs Kirkpatrick warned that if the U.S. did not take "prudent mea-sures" to belp Central American countries defend themselves, it Sandinista Government's "record of could face a major threat to its own repression, we should not wonder security in three to five years that the opposition, denied other could face a major threat to its own

would require the commitment of means of expression, has taken up U.S. combat forces, the "biggest threat" could come from Soviet deployment of nuclear and chemical weapons in the region, she said.

the mining of the ports, which caused an outery in Coogress last His administration was still hoping that the Sandinistas can be brought back from the brink peace-

remarks was clearly to justify his decision late on Friday night to

The main thrust of Mr Reagan's rush urgent military aid to the U.S.backed Government of El Salvador, without waiting for full congres-sional approval. Congress ad-journed for the 10-day Easter recess on Friday without action in the House of Representatives on Mr Reagan's request for an emergency \$62m in military aid for the hard-

pressed government forces. Mr Reagan invoked emergency procedures under the Arms Export Control Act.

Salvador arms adequate, Page 20

IMF to get delayed \$6bn loan after Saudi deal

BY STEWART FLEMING AND MAX WILKINSON IN WASHINGTON

A LOAN of \$8bn that the Internagently needed last summer to sup-port assistance packages promised to Third World countries appears at port to Third World countries. gently needed last summer to sup-

last set to go ahead.

The loan had been delayed by demands from Saudi Arabia that its \$3bn share sould be backed by gold. The other 53bn is being provided by European countries and Japan.

Months have been spent in diffi-cult negotiations over the package,

and the Fund appears to have been embarrassed by the delay. Now, however, the Sandis are believed to have accepted a complicated legal guarantee, thus overcoming the im-In the final communique from the

Fund's interim committee meeting in Washington last week, ministers noted that the Sobn loan was "in the process of being concluded with the Officials and central bankers said the delays reflected the Saudis' traditional caution in financial affairs

as well as the IMF's great difficulties recently in obtaining the sup-port it needed from the U.S. The U.S. has not taken part in the most recent loan, and last automn Congress threatened to plunge the IMF into a crisis by failing to ratify the U.S. share of a general increase

in quota subscriptions. Although that increase has since been approved by Congress, the Fund is in some doubt how it will meet its financing needs in a year's

On some estimates it would need tional Monetary Fund said it ur- to borrow \$4bn to \$6bn in 1985-86 to

> The amount of financing needed will depend on decisions at the anmual meeting in September about how much support member countries should be able to request from the Fund. According to senior offi-cials attending last week's interim committee meeting, a "commitment gap" might open up by the end of

this year.
That means that the resources would then be inadequate to cover all future commitments for assistance, although the IMF would almost certainly not be faced with an immediate shortage of liquidity.

The future question, and the uncertainty surrounding some of the

largest debtor countries that the Fund is supporting, appears to have been behind the Saudi request for a gilt-edged security for its loan. Although the Fund appears to have been unwilling to provide that, the impasse seems now to have been overcome with a complicated legal guarantee for the Saudis. Some of the Saudis' reservations

appear to be shared by some leading industrial countries, which believe that in the light of the uncer-tain attitude of the U.S. Congress, the proportion of their reserves committed to the Fund was becoming uncomfortably high.

Background, Page 2

Debt ruling may affect UK banks

BY DAVID LASCELLES IN LONDON

THE Bank of England is telling tains that a good part of banks' gen-British banks that they may not be eral provisions do not fit this defini-allowed to count as capital large provisions made recently against earmarked to meet bad debts, like bad Third World debts. If the British central bank makes

firm ruling on this rather technical but controversial matter - and the indications are that it will - it could affect banks' capital ratios, the key measures of their strength. Banks make two kinds of provisions: specific ones to cover known

bad debts, and general ones as a precaution against loss when times are bad. British banks have responded to the Third World debt problem by sharply increasing gen-eral provisions over the last two General provisions come out of

after-tax earnings, so they take a slice off profits. But banks are allowed to include them as part of their capital because they play the same role as capital, which is to be generally available to meet bank

But the Bank of England main-

those in Latin America. This means they would have to be taken out of

UK bankers say they are annoyed by the Bank of England's attitude, which some see as a new line. But the central Bank maintains that the principle has always exist-ed but has not been tested in this Most banks have more than

doubled their general provisions, to the point where they now account for between 5 and 10 per cent of capital. Barciays has £398m (\$438m), NatWest £254m, Midland £244m and Lloyds £243m, but the banks have not said bow much relates to shaky foreign loans. Bankers are concerned that their capital ratios are already under

pressure because of the large new tax liabilities caused by the recent

Continued on Page 20

Mauroy to confront **Communist** partners

By David Housego in Paris

M PIERRE MAUROY, the French Prime Minister, said last night that the Communists within the ruling coalition were to be asked for a "clarification" of their position towards the Gov-

Speaking in a radio interview, M Manroy gave the impression that the Government intended to force the Communists to choose between loyalty to the coalition or taking the responsibility for a split. He said that he wanted the Communists to remain in the Government but that he could not accept their "systematic calling into question" of government

policy.

M Mauroy said that there was a lack of coherence in the Communists being members of the Government while at the same time distancing themselves from it in a way that undermined its unity. He said that he and Presi-dent François Mitterrand would take the appropriate decisions

The latest gesture by the Communists that has angered the s the unexpected decision by M George Marchais, the party's secretary-general, to take part in Friday's march by vorkers in protest at the fresh round of closures in the in-

This followed the clear warning by President Mitterrand at his press conference the week before that "the time has come to put things clearly." The Communists have increas-

ingly dissociated themselves from the Government's policies while continuing to participate in the benefits of power. The Com-numist Party leadership itself has seemed divided on the overall value of remaining in the Government. Their criticism has increased as they have begun preparing their campaign for the European elections in June. M. Mauroy's warning came

during a weekend when the Communist-led CGT union federation, after campaigning against job losses in the steel sector, was preparing to shift the battle to the car industry.

It has promised a "tough" reaction to the announcement by Citroën that it would proceed with plans for making 2,937 employees redundant as part of a reduction in its workforce by 6,600. Citroën, which is part of the Pengeot group, wants to reduce its 45,000 labour force as a result of accumulated losses of FFr 3hn (\$375m) over the last three years

The CGT has called for a workers' meeting today to decide on action. On Friday, when Citroën confirmed the job losses to a cantral works council meeting, the union brought production virtually to a hait at the company's Animay-sous-Bors plant on the outskirts of Paris. A CGT official said that the response would be as "tough" as in 1982 - a reference to the hitter strikes in Citroen's Paris-based plants that year.

Continued on Page 20

British coal strike 'may force more pit closures'

A PROLONGED national mineworkers' strike in Britain would damage many pits beyond repair and their closure would make compulsory redundancies inevitable, Mr Ian MacGregor, chairman of the National Coal Board (NCB), said yesterday. He said it was "entirely possible"

that one in four of the board's mines would be lost if a strike over pay and pit closures continued until Mr MacGregor again made it

clear that he had no intention of being deflected from his plans for the closure of 20 pits with the loss of about 20,000 jobs. He said: "There will be no change in the ultimate bjectives here." Asked if, in view of the likely damage of a lengthy strike, he would still say it was worth holding

out, he replied: "Yes, I do say that." Asked in an independent televi-sico interview if he would support the Government stepping in to move coal to power stations in the event of a lengthy stoppage which had the support of rail unions, he replied: "I would think it makes sense to make use of all the stocks that are available." Mr Arthur Scargill, leader of the

National. Union of Mineworkers (NUM), interpreted this as Mr MacGregor's backing for the use of troops. He again accused the NCB chairman of "bully boy tactics" and said they would only strengthen the resolve of the miners.

Speculation over the Govern-

ment's role in the dispute was heightened at the weekend by reports that Lord Trefgame, a De-fence Minister, would join today's meeting of the "inner cabinet" which has been monitoring the



Mr Arthur Scargill

It was said that Lord Trefgarne would be giving an up-to-date re-port on contingency plans for the use of troops. But any decision to bring in the army to shift coal stocks seems some way off. The Department of Energy has said that

months supplies.
Other trade unions were yesterday rallying in support of the miners. Mr Moss Evans, leader of the Transport and General Workers' Union, Britain's largest, said all unions bad a duty to ensure that miners' families were oot "starved

Mr David Basnett, bead of the municipal and boilermakers' union, urged Mr Scargill to go to the

Trades Union Congress for assistance.
The executive council of the National Union of Public Employees

decided at the weekend to authorise

donations of up to £50,000 from na-tional funds for the NUM, and to consider further belp in future Overwhelming evidence, both anecdotal and from polls, now suggests that the NUM leadership would get backing for a national strike call and a reasonable majori-

ty on a strike vote. The Government is braced for the likelihood of a catiocal strike being launched after a special NUM delegate conference in Sheffield oo

Most observers expect the NUM leaders to win the support of the unioo as a whole which has so far eluded them - expectations backed up by the results published at the weekend of two polls of miners. One, conducted by the Harris Re-

search Ceotre for independent tele-

vision, showed that 55 per ceot of miners sampled would vote for a national strike if a ballot was called. Some 33 per cent said they would vote against and 12 per cent were undecided. The secood poll, carried out by farket and Opinion Research In-

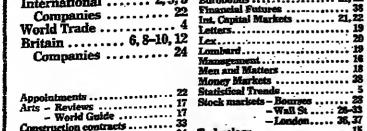
ternational for the Sunday Times, bad 68 per cent favouring a strike with 26 per cent against and 6 per cent undecided The Harris survey showed that 58 per cent of those questioned were in favour of the proposed change in

NUM rules oo strike ballots. The

change, to be considered by Thurs-

day's conference, would reduce from 55 per cent to 50 per cent plus Continued on Page 20

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Letters..... 19

European defence: 1954 Lex: making a market for comes around again 19 equity 20 Technology: rustproof care Desk-top revolution:

Germanys; UK jobs 18 Survey Section IV

Editorial comment: the two Spanish banking and finance:

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by robots 15 Survey Section III

OVERSEAS NEWS

Max Wilkinson and Stewart Fleming assess last week's Interim Committee meeting in Washington

'Don't cry for Argentina—theme for a sombre IMF'

American

behind the meetings of the their loans to Argentina non-international Monetary Fund performing if the country should which ended in Washingtoo this weekend was: "Don't cry for Argentina."

2

The theme may have been muffled in the formal speeches and the bland tones of com-munique-speak. Nevertheless the U.S. and four Latin agreed a strict programme of economic reforms with the American countries a fortnight ago set a sombre note for much of the more important vertical discussion.

As one senior minister put it: "There is a danger that it (the rescue deal) might be read as a softening of the very firm attitude which the international community has taken to debt problems so far . . I think there is e risk that a debtor's cartel might be formed."

These fears, shared in different degrees by most of the major Enropean countries centre on the question of whether the Fund will now be under pressure to patch together a watered down set of economic reforms as the con-dition for its own assistance to

A deal with the Fund would be the "seal of approval" for a more general rescheduling of Argentina's \$43.6hn of foreign

fall to meet the next deadline for interest payments on June

Last week ministers were worried that the U.S. backed rescue may bave appeared to set a precedent for bailing out deb-tor countries before they have

cause the Fund did seem to have given at least some implicit backing to the \$500m rescue to enable Argentina to meet its last debt servicing deadline on March 30.

This came in the form of a progress report by Fund
officials on their negotiations
with Argentina, suggesting, in
the words of one delegate, that "all may be well." It was a sufficient signal for the U.S. to go ahead with its part in guaranteeing a \$300m loan from other Latin American countries.

However, monetary officials stressed last week that the progress report did not have the status of a "letter of intent." the formal first stage of a Fund have said thet a disastrous pre-cedent for future debt cedent for future debt negotiations might be set if the

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personal computer.

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has a keyboard.

major industrial countries and it seems that the U.S. has been given a covert warning to move cautiously in protecting its commercial banks profits in future-election or no election. In the ultimate case of a financial shoot-out dehtors and creditors which

\$500m loan was seen as evidence that the Fund's strategy is working to promote mutual self-help among debtors rather than a cartel against creditors.

Mr Jacques de Larosiere, the IMF's managing director, said he regarded this development as "very important indeed" because it showed that "countries in the country of the countries in the countrie most delegates seem to think tries in a region with debt unlikely—the developed coun-tries apparently feel that conclusion that it is better to

Ministers were worried that the U.S.-backed rescue might have appeared to set a precedent for bailing out debtor countries before they have agreed a strict programme of economic reforms with the Fund.

further delays in payments hy Argentina might be e lesser evil than a sign of weakening the Fund.

As one very senior banker put it: "In that case, we could only look the Argentinians in the face and say, 'I am sorry, we cannot agree. We are aware of the consequences." of the consequences. Although there is an element of shadow boxing in ell this, as there was in the run-up to the Fund's agreements with Mexico and Brazil, ministers did seem to feel the need last

week for some sort of strength-ening of resolve.

get together and try to

The "Argentina Question" also highlighted a more general dilemma for the Fund: whether it should continue to stagger one debt rescheduling One European central banker

their problems."
He added the caution: "This action is the end of the

crisis to the next or use its influence to promote a longerstretching out maturities. said he was anxious that the Fund might have difficulty in

dent of the West German Bundesbank, said: "The commercial banks must set about rescheduling, not from year to year, from quarter to quarter or month to month. They have to think about longer term solutions. Fund

The seems still to favour the rela-tively short-term "case by case" approach. In essence, it concentrate the minds of debtor nations so wonderfully as the perception that they are accelerating towards a cliff

On this view, the periodic bouts of vertigo suffered by the financial institutions are a price that must be paid for giving the Fund e continuing opportunity to enforce and monitor reforms in the debtor countries.

However, the Fund has argued that the amount of new money" which the commercial banks will have to provide should now decline steadily year by year and this should encourage the commercial should encourage the commer In its latest economic out look, discussed by ministers last week, the Fund suggests that the ratio of external debt to exports for the major debtor countries might decline from 194 per cent last year to 165 per

It is clear, therefore, that being tough on countries like Argentina will not be enough. The Fund will need substantial extra resources over the next few years, if it is to be effective as a world economic policeman. At the same time large flows of aid and investment through its sister organisation, the World Bank, will be needed for the pocrest countries whether they are debtors or not.

The major worry in Europe and Japan must be about how these funds are to be provided if the U.S. (easily the largest shareholder) continues to have difficulties in providing its share of the resources which others

Last week's meeting offered no encouragement. It ended in disarray without formal egreement on the next three-year contribution of \$9bn in the International Development Agency, the World Bank's soft

Although every country said it wanted to agree to the sid programme, it was deadlocked by an argument between the U.S. and Japan which linked the aid question to their own trade

discussions later this year or next on the finance which the Fund itself will need in order to continue with business as

Protests continue for third day over Frankfurt runway

FRANKFURT - Demonstrators and riot police clashed yesterday for the third day at Frankfurt airport's con. troversial new runway, as about 150 youths tried to ram a concrete wall surrounding the runway, set alight petrol canisters and brushwood piled against the wall and threw flares at riot squads. Police used water cannon to extinguish the fires and then turned them on the

Police said between 250 and 300 urned up at the airport, the second busiest in Europe after London's Heathrow. On Saturday, 26 police officers and several demon were injured when protestors threw ballbearings and petrol bombs at riot squads. Organisers said an estimated 16,000 people took part in the action, which resulted in the arrest

Earlier as the protestors walked esterday in bright sunshine along the barbed wire-topped concre wall bordering the runway, tight se-curity was in evidence. Water cannon were positioned inside the barrier while mounted police and foot sure at peak periods.

As the demonstrators mingled with a few amateur plane spotiers and families on Sunday outings, the only sign of the earlier protest were tattered balloons, released in an unsuccessful attempt to disrupt air traffic, and the smell of tear gas in

The protests are the latest in 28 years of court battles and some imes violent demonstrations inst the runway, built at a cost of DM 225m (386.5m) including over DM 20m for the wall, police watch-

made since plans for the project first proposed in the mid-

will damage nearby woods and in-creese aircraft noise in villages on the flightpath. Airport au say the new runway, used only for takents, is needed to relieve pres-

French inquiry over stray Soviet aircraft

ities have begun an inquiry into a flight by a Soviet civilian arriver over a secret French naval base."

An Aeroflot Topoley 134 entered probibited air space over the Toulon naval base on Friday, and apparently ignored several warnings from civilian air traffic controllers that it had diverted from its approved flight path into a restricted area, which contained France's first nuclear attack submarine Rubis and the sinerall carrier Foch, both of which were in dock.

The aircraft apparently went off course shortly after being given permission to begin its descent to-

brought it directly over the navel base, before lending 20 minutes lat-

There have been similar inci-dents involving heroilot planes in the past, notably during test firings of missiles from a French military base on the island of Levant of

It is thought unlikely that the Soviet pilot was on a spying mission, since he knew his airtraft would probably be searched by French au-thorities on arrival. The more likely explanation is that he wanted to test France's military reaction to such an incursion and to momitor its defence radar frequencies...

Hart wins Democratic caucuses in Arizona

BY REGINALD DALE, U.S. EDITOR, IN WASHINGTON

SENATOR Gary Hart won the veckend's Democratic concuses in Asimonal Statisting his hopes of had spent much more than Mr reviving his diagging president. Mindfale in Asimonal that won 45 per cent for delegates in his native state of his main twal, former Vice. President Water Mondale.

The voite translator into 17.

The vote translated into 17 him 34.4 per cent support. delegates for Mr Hart at July's . A member of uncommitted

a HS3-member national conven-tion in San Francisco against 15 state primary switched to Mr for Mr Mondale and one for the Jackson to give him a delegate third remaining candidate, the count of 17. Fourteen South Rev Jessle Jackson. Carolina delegates remained Mr Mondale's campaign staff uncommitted with soven for conceded that Senator Kast, Mr Hart and six for Mr who comes from Colorado, was Mondale.

Texas scraps evolution rule for textbooks

DALLAS—The Texas Board of Education has voted to cancel ridiculous position; and we had a rule that restricted mention in eliminate it." Mr Will Daris, of the theory of evolution in a board member said.

The board meeting in El Paso; asted after Mr Jim Mattox. Texas Aftorbey General, told board members that the 10-year old rule was unconstitutional. The rule also required that ridiculous position; and we had to eliminate it." Mr Will Daris, of the theory of evolution and the control of the control of the rule required that ridiculous position; and we had to eliminate it. "Mr Will Daris, of the theory of evolution in a board member said.

Mr Davis and another board member, Mrs Virginia Currey, sought to overturn the old rule, to encourage textbook publishers who had avoided a full discussion of evolution and

old rule was unconstitutional.

The rule required science tentbooks to identify Charles Darwin's theory of evolution "as only one of several explanations of the origins of immankind."

The rule also require that evolution be written about in the textbooks "in a manner that the rule also require that the rule of the r

evolution be written about in the textbooks in a manher turn the evolution rule was not detrimental to other theories of origin."

But in striking down the rule, the 27-member board also approved a new regulation to appearse Creationists who believe in the Biblickl story of the origin of humankind, and want their beliefs included in state.

The new regulation will require publishers to state that evolution is theory, not fact.

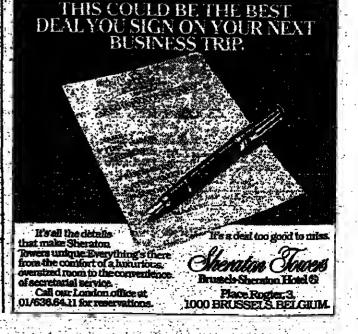
The new regulation will require publishers to state that evolution is theory, not fact.

The new regulation will require publishers to state that evolution is theory, not fact.

FT16/4/84

Mr. Davis and another board member, Mrs Virginia Currey, sought to overturn the old rule, to encourage textbook pub-lishers who had avoided a full discussion of evolution and other Creation theories.

"I hope the textbook publishers will get the message they have nothing to worry about," Mrs Currey said. Tentative approval to over-



The pressure for the Fund to reach e rapid agreement is undoutedly strong, since U.S. However, the involvement of Mexico, Brazil and other Latin organising rescues on the scale of last year's help for Brazil mount fortists tower (P.S.S.) Has Set Set Server Simply put your finger on Touchscreen personal computer the screen of the HP 150 State Gell & Sun Strater Call Formate Formats Server Brook Grand prepare the budget; to edit your novel; check stock: shape the future; make a pie; make a statement; The second second fruit Cardilla Exit Rear Cod Cord Cord Despired Solort And Find Cards Cards consult the index; find an address. Get in touch.

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HP 150 at a Glance. User Nemory: 256K-640K bytes. Operating System: MS-DOS* 2.II. Microprocessor: 16-bit, Intel 8088. 8Mfrz. Permanent Memory: (ROM) 150K bytes. Disa

1024 characters and symbols in ROM. Keyboard: 107 keys (total), 8-lt.cord ettaches to system unit, 10-key numeric pad 12 function keys [8 screen labelled]. Compact State: 21 sq. ft. desk space. Comprisis

2 RS-232 ports. HP-IB (IEEE-488) Built-in. Up to 19,200 bits per second DSN network link. Pertpherates Choice of printers (stickulate optional internal printer), plotters, 3.5" Roppy drives (254K bytes

self-testing Display Screen: Touch activated green phosphor, 80 characters x 27 lines, 9 x 14 dot character matrix. Upper and lower case Simultaneous text and graphics case

Jeilin Ila

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Telephone.

To: Enquiry Section, Personal Computers, Hewley, Packard Ltd., Eskdale Road, Winnersh, Wokingham, Berkshire RG11 5DZ.

Sikh extremists set fire to 30 railway stations in Punjab

AT LEAST 30 railway stations in the north-western Indian border state of Punjab were set Although no casualties were jostle for control. Although no casualties were reported, the arson was thought to have been caused by Sikh terrorists in an attempt to escalate the tension at a time when the Sikh leadership appears to be sharply divided.

The Indian Government, which has taken direct control.

Pamphlets were distributed in the Golden Temple in the holy city of Amritsar at the weekend in which the extremists and moderates burded charges at each other.

The Indian Government plans no immediate attempt to end the Punjab crisis, feeling that the internal wranging in the views the latest developments very seriously. Additional rail-

very seriously. Auditional rail-way protection security forces were bastily despatched yester-day to belp the state authorities. More attacks on the railways are feared since the terrorists are feared since the terrorists
bave acted in a planned and coordinated manner all over
Punjah. The arson in all 30
stations followed a similar
pattern. An unsuccessful
attempt was also made to derail
a train,

The co-ordinated attack on the
railway stations and property
yesterday suggests that the
extremists are making a determined attempt to forestall any
move by moderates to respond
to peace calls by national
leaders.

border state of Punjab were set on fire soon after midnight yesterday, adding a new and ominous dimension to the two-year-old agitation by Sikhe was an associate of Bhindranwale, the Sikh extremist leader, suggesting that the ominous dimension to the two-year-old agitation by Sikhs for religious and political autonomy.

Although dimension to the two-divisions in the movement are increasing as different factions

the internal wrangling in the Sikh leadership would make any peace move meaningless. Instead, it is preparing to deal with a fresh phase in the violent agriculture.

The co-ordinated attack on the

Pledge on Tamils conflict

BY OUR NEW DELHI CORRESPONDENT

SRI LANKA'S Minister for National Security, Mr Lalith Athulathdudali, said here yesterday his government was committed to finding a political solution to the ethnic conflict in his country.

Mr Athulathdudali is in New Delhi to explain the Tamil situation in Sri Lanka where nearly 40 Tamil "terrorists" that the Sri Lanka Government ware killed by security forces had decided to crack down on last week in and around Jaffna "terrorists" and had given up

situation in Sri Lanka where nearly 40 Tamil "terrorists" were killed by security forces last week in and around Jaffna in the north where the Tamil population is concentrated.

with miniati ministers to low-ing fears among Indian Tamils that the Sri Lanka Government that the

Kampuchea base overrun BANGKOK-Tank-backed Viet- National Security Council, said namese troops yesterday won the Vietnamese attack had control of an important base of forced thousands of Kamputhe Khmer Peoples' National chean refugees across the Liberation Front near that Thai-

Kampuchean border, according of Aranyaprathet to Thai military officials. They The Thai militar said that 50 civilians had been was still sporad The Thai military said there was spill sporadic fighting killed and many more wounded. between the rue including 35 who they said had namese troops. between the guerrillas and Viet suffered skin burns from poison About troops took part in the fighting, Earlier Prasong Soonsiri, they said. secretary-general of Thailand's Reuter

Spain jails 3 colonels over coup plot

By David White in Madrid

THREE of the army colonels accused of plotting a pre-election coup d'etat in Spain in 1982 received statutory 12-year prison sentences yesterday after a five-day court martial. But the military tribunal called on the Government to commute the sentences to four years. The

fourth defendant was acquitted. The three convicted artillery officers, Col Luis Munoz, Col Jesus Crespo Cuspinera, and Lt/Col Jose Enrique Crespo Cuspinera, who were all found guity of conspiracy to rebel, are to appeal to the Supreme Military Court. tary Court.
The sentence of 12 years

The sentence of 12 years and a day is the minimum laid down for conspiracy convictions. The court said there was no proof that the fourth man, infantry Lt/Col Juan Fernandez Hidalgo, participated in the plot.

Sr Eduarda Sotillos, chief Government meldown and Government spokesman, said no official statement would be made on the sentence.

However, it is bound to revive debate about the capacity of military courts to deal resolutely with cases of this kind.

This debate area to a head

This debate came to a head two years ago with a public scandal over the sentences initially banded down against the leaders of the spectacular coup attempt of February 1981. The sentences were subsequently increased. The five-man military tri-bunal said the 12-year mini-mum sentence, which was in-troduced after the 1981 revolt was "excessive" in the circumstances.

The sentences imply auto-matic dismissal from the army although the men stand to receive 80 per cent of their The court said the three

men had agreed on a blue-print plan for the violent overthrow of Spain's political system and installation of a military regime, under which unions would be disbanded, regional autonomy statutes placed under control.
The defendants maintained that their plans were simply a "theoretical tactical exer-

Hopes fade for Lebanon disengagement plan

A DISENGACEMENT plan to separate the warring Lebanese signed up for a badly needed their church leaders apprehen-militias and hopes of a Syrian-disengagement force composed sive of continued shelling. Lebanese summit appeared to of Lebanese gendarmes and April showers, discouraged the be shattered yesterday follow-retired army officers to act as a habitual outbursts of artilbe shattered yesterday follow- retired army officers to act as a ing a weekend of untempered hoffer separating the fighters. violence and no progress on the The plan had required 2,000. political front.

The President's living quarters at the Bashda Presidential end. palace received direct hits. Let damage but no one was hurt

Officials' and politicians' On Saturday baphazard shell-ing of residential areas by as a buffer between Christian gunners in Christian East and militias and the Lebanese Moslem West Beirut left 20 Army on the one hand and people dead and many more Moslem and Druze fighters on wounded. Moslem and Druze fighters on the other bad also yielded no concrete results by the week's

Lebanese Christians did not

MR ROBERT MUGABE, Zim-

ers and international news-papers, of security force

brutality against the minority Ndebele people in Matabeleland

Province at the weekend. He later accused the Roman

Catholics of supporting the opposition party of Mr Joshua Nkomo.

The Prime Minister claimed

lery duels, early in the day, but the relative calm was shattered in the late afternoon when several shells slammed into East Beirut and other Christian

areas. conditions deteriorated, several Moslem opposition leaders declared they favored the return of a cover. Syrian deterrent force tobelp pacify Beirut.

Mugabe denies church's claims

There were no clear signals

on such a move without the necessary regional political

 Israeli Defence Minister
 Moshe Arens called for a separation of Syrian and Israeli forces celebrate Palm Sunday yester- from Damageus that wishes for in Lebanon on Saturday saying for day with the usual ootdoor pro- a Syrian peacekeeping force that international peace-keeping city

Meanwhile, only 1,250 men cessions under instructions from would be granted. However troops should be deployed in igned up for a badly needed their church leaders apprehenseveral travellers reaching eastern Lebanon's Bekan Valley, sive of continoed shelling. Lebanon by land from Syria Renter reports from Tel Aviv. over the past two days said they saw Syrian trucks and armoured personnel carriers painted white with "Peace-keeping forces" written on the Damascus (23 km away) is in

ide. range of Israeli guns.

Analysts here discounted the The Shi'ite Amat movement importance of such preparations yesterday released an American saying Syria would not emhark professor and a French citizen who were kidnapped in mainly Moslem West Beirut last February, Prof Frank Regier is an engineering instructor at the American University of Beirut and M Christian Jobert worked for a French company in the

BP likely to bid for more China oil leases

BRITISH Petroleum bas indi cated that it is likely to bid for additional Chinese offshore oil exploration leases, and it has reaffirmed its confidence in the potential of its existing lease

Mr Mike Yeldham, an assistent general manager of BP Petroleum Development in Canton, bas rejected reports suggesting BP is concerned about the poor results of its drilling so far in the South Thina Sea

Chins announced last week that a second round of bidding could begin soon and the model contract" on which bids of three wells drilled since last November, by the BP-led consortium, one had very little oil flow and two bave been dry. Work on a fourth well bas heen proceeding for about a month.

Mr Yeldham said the consortium's drilling plans were proceeding normally and work was expected to begin next week on the first well, which con-tained oil, in its lease area in the South Yellow Sea. "After three wells there is "After three wells there is no way that anyone can draw conclusions, so we can't be pleased or disapnointed. It would be extraordinary lucky if we hit oil in one of the first wells we drilled," he said.

The four-page report eccuses the Mugabe Government not just of beatings and killings of restock with foodstuffs, that the distinct of the manner of the first that the first wells we drilled," he said.

tutions of Joshua Nkomo which have been sustaining more dissidents."
Mr Nkomo's Zapu party, which relies almost exclusively on the Matabele people for its support denies any links with the anti-Government dissidents

Mugabe Government.
Mr Mugabe, making his first Mr Mugabe, making his first

The report accuses the army

visit to the troubled Matabele

land area for nine months, said

his Government had heen

handed the church report, in the area suffer because of

detailing atrocity allegations, on

April 2.

The report accuses the army

giving the

detaines review tribunal.

While Mr Ndlovu's defection

is hardly a surprise—since he

bas made little secret of his

Drillers for a joint venture civilians, but also of dellherate Government undertake a serious involving China, the Royal policy of starvation. Soldiers political dialogue with the butch-Shell group and Exxon have found evidence of crude must first hring dissidents to and that a government Minister oil in their first well in the security forces before they south China Sea, reports AP-DJ could expect any food, the from Peking.

of brutality in Matabeleland The Government relaxed its tion of the report suggests there curiew restrictions in Matabe- is little prospect of his adopt-leland last week, saying that the security position had eased and His own political morale was babwe's Prime Minister, has curfew restrictions in Matabe-denied allegations by the leland last week, saying that the country's Roman Catholic lead-security position had eased and

tion was improving.
The report claims that many The report claims that many villagers have been taken away needed on the eve of the fourth for interrogation and not seen since, while others had been the Roman Catholic church had tortured by electric sbock. One decided to "counter successful mission "had a list of 22 people Government activities" because killed by security forces in the they were directed against insti-past two months alone."

'Grave concern'

In their report, the seven bisbops say: "We wish to express our grave concern about the starving people in Matabeleland South arising who have been waging a from the continuing countries of guerrilla campaign against the of starvation, beatings of people, torture and killings."

> tour the region with independent observers.

yesterday, Zimbabwe's main given a boost at the weekend weekly newspaper, which has not reported the church's allegations, quoted Mr Mugabe's Minister of Mines, bad decided assertion that the military situation was improving.

The ruling Zanu-PF party.

anniversary of Zimbabwe's in-dependence, and at a time when the Prime Minister is heing assailed by the minority political parties over his buman rights performance and by farmers and business leaders over his management of the

Bishop United African National Coun-cil also attacked the Government sharply critical statement call-ing for the release of the bishop who has been detained without trial since October last year, and whose case has still not apparently been referred to the

is hardly a surprise—since he bas made little secret of his disapproval of Mr Nkomo's leadership—there is speculation that other Zapu Ministers will follow his lead.

This is rejected by Nkomo informed his Western counter-loyalists who argue that it is those Zapu moderates who are that because of Warsaw pact and that a government Minister or the region with independent observers.

Mr Mugabe's ontright rejection Matabeleland.

Allies in fresh protest over Berlin air curbs

By Leslie Colitt in Berlin THE THREE Western allies in West Berlin bave protested to Moscow for the second time in recent weeks over continuing restrictions on allied flights in the three air corridors between the city and West Corrections. the city and West Germany.

In a co-ordinated move,
Britain, the U.S. and France
told the Soviet Union of their

told the Soviet Union of their concern over the limitations imposed on the altitudes at which allied aircraft fly in the air corridors to Berlin over East Germany which have been reserved for them since the end of World War II.

Mr Peter Boon, British spokesman in West Berlin, said the allies took up the matter with the Soviet ambassadors in

with the Soviet ambassadors in their capitals late last week. He noted that they also voiced their displeasure to the Soviet officials in Berlin.

Last week Herr Eberbard Diepgen. West Berlin's governing mayor, said after talks in Washington with President Reagan and senior U.S. officials that they were very concerned" about the restrictions.
Mr Lawrence Eagleburger, U.S. Deputy Secretary of State, lodged the U.S. protest with the Soviet Ambassador, Mr Anatoli Dobrynin, on Thursday, Allied officials said the chief Soviet representative in the air safety centre in West Berlin

What's growing on Merseyside



How, in just 21/2 years, do you transform 250 acres of total devastation, oil tank farms and rubbish tip into a stunningly beautiful landscaped setting for Britain's

first International Garden Festival?

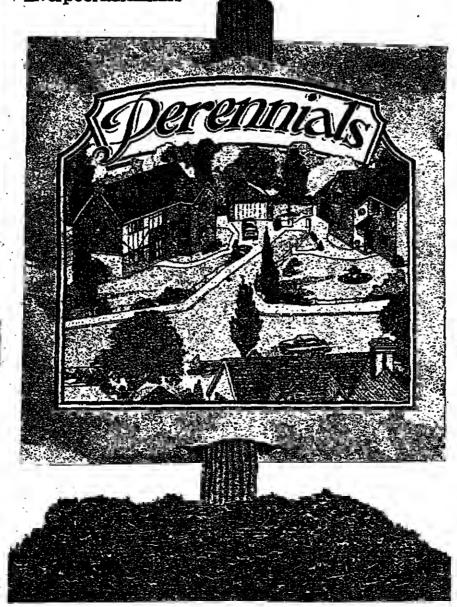
Many people said it would be a miracle if it ever happened.

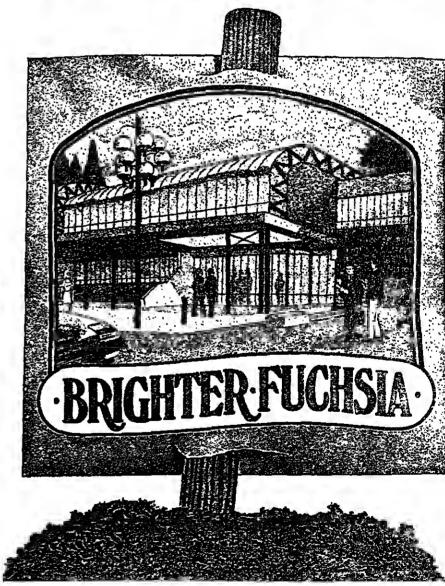
Come and see it for yourself after it opens in May. It's surprising what you can achieve when you plant a good idea on Merseyside.

The Garden Festival will flower for just under 6 months. In October the gates will close.
But that's not the end. It's just the start.

Soon after, the entire landscaped area will again be in bloom. New industry. New housing. New leisure For generations, Merseysiders will be reaping the benefits. And the seeds we've sown in other Dockland

areas are now bearing fruit. Thirty nine new factory units at our Millers Bridge site. The new B.A.T. Enterprise Workshops at Brunswick Dock. The transformation that's taking place at Albert Dock – Britain's largest Grade 1 listed building which, after years of decay, will soon, once again, become a proud Liverpool landmark.





The future is bright for Merseyside. The changes taking place are visible. What's growing on Merseyside? Confidence. Find out for yourself.



Contact Alex Anderson, Merseyside Development Corporation. Tei: 051-236 6090.

EEC inquiry into Japan bearings 'dumping'

By Ivo Dawnay in Brussels THE EEC is to leunch an inquiry into allegations of dumping by Japanese hall hearing manufacturers after coming under intense pressure for action from Community pro-

The investigation, which is expected to be announced next week, follows two earlier EEC investigations of the market in the 1970s. These ended with negotiated settlements with the Japanese who agreed to regulate the pricing of their £1hn a year

exports.
Last month the European
Commission imposed anti-Commission imposed antidumping duties of up to 37.5
per cent on miniature ball hearings produced in Jepan and
Singapore. The new aix month
long inquiry, which will cover
all bearings with diameters
over 30 millimetres, begins a
procedure that could end in
similar action against imports. Latest Commission figures showed that Jepanese manufacturers held 11.5 per cent of the total EEC market, rising to 14.4 per cent in the volume market, primarily the motor

industry.

The greatest penetration was found in West Germany and the UK where the Japanese market share had risen to about 16.5 per cent with prices averaging t at 20 per cent lower than

their European competitors.
The Federation of European
Bearings Manufacturers Associations has pointed out to the Commission that EEC producers have cut their work-forces by 9 per cent since 1979. hut cannot compete with prices sometimes as much as 84 per

cent below cost, Commission is also Britain's oldest formal treaty expected to announce measures ally - since 1910, Mrs Thatcher sewage. to monitor the sales of Japanese quartz watches to the EEC, after allegations that negotiated is likely to register the keen

As Portugal's number one Portugal for the first time in The main reason for the drop interest of British concerns in trading client fourth supplier of 1983. Then, exports to the UK, in British exports seems to have getting orders in areas where goods and commodities, Britain mainly textiles and clothing, been decreased sales of vehicles the Portuguese plan to invest bas fought to maintain its posi-footwear, lumber and wooden and componants. quotas are being exceeded.

David Hellier looks at some of the world's more prestigious export awards

Star exporters vying to join the Oscars

EXPORTING can be a financially rewarding business, but it can also be the source of important ewards given by major national institutions to those who are most successful

In the UK, the latest recipients of the Queen's Award to Exports will he announced on Saturday. Ahout 90 companies receive the award each April
and there are usually nearly 10 times as many epplicants as there are winners.

1ts prestige, not just within the UK but overseas as well, makes it a valuable bonus for Less well-known, perhaps, are

the export award ceremonies held in other countries. The South Koreans, for example, who heve little difficulty in exporting, hold an Export Dey each November, in which the year's most prolific export companies receive minieture stainless steel towers from the President as e token of honour.
The height of the towers, usually around 20 inches, depends on the company's export

Last year's tallest tower went to Hyundal, one of South (Oscar de l'exportacion), held Korea'a biggest conglomerates. each December in Paris. Orga-

which shifted in Portugal's favour last year, will be e key-note of Mrs Margaret Thatcher's

official visit to Portugal from

In the U.S. companies are nised by the journal "Le given "E" awards, which comprise a flag with a hig "E" (for French Trade Department, the export) inscribed on it and a scroll. About 50 firms, scroll. nominated by District Export Departments, receive the award annually.

Mr Michael Mercurio, U.S. Commercial Attache in London, says of the "E" scheme: "It's a very nice thing for the companies involved, but in the overall scheme of things it does not have the same kind of visibility that you have for your awards

In Sweden, the major compe-tition, Exportiff is sponsored by the Swedish Trade Council and SAS, the national airline. It rewerds just one company each year with prize money of around £8,000 and guaranteed publicity in the Swedish Trade Council magazine. A aecond competition, the Swedish Export Championship, rewards personal export achievements. It is second competition with the second competition of the swedish of the second lexible secon sponsored by Swedish banks and an association of Swedish companies. The competition winner is invited on a trip to

turnover during the previous the Far East. The French have their own Oscar ceremony for exporters (Oscar de l'exportacion), held

ing computerisation in govern-ment and finance, coal-fired

power stations, a gas pipeline which Portugal hopes one day

Lisbon's antiquated, defective

Oscars are divided into 10 different categories.

As for Japan, it is not exporters that receive awards hut importers. In an attempt to show the rest of the world that they are trying, the Japanese introduced the importers' awards last June, when six companies were honoured by Mr Yasuhiro Nakasone, the Prime Minister. Among the winners were Jardine Matheson, the Hong Kong trading company. and Burroughs, and Procter and Gamble of the U.S.

winners, 15 other companies were commended for their import achievements, and these included five non-Jepanese Few countries, however, seem to have the same kind of prestige attached to their awards as the Queen's Award

In addition to the six outright

has in Britain. Mr David Royce, director general of the Institute of Export, thinks that the Royal hanour still holds greet weight across the world, especially in countries where the Crown's

of the escudo after hefty 1983

devaluations and more energetic marketing by Portuguese textile

Trade keynote of Thatcher visit to Portugal

ANGLO-PORTUGUESE trade, heavily: nuclear energy, tele-tion in recent years against furniture, cork, pulp and waste which shifted in Portugal's communications digital switch-increasingly-aggressive competipaper, beverages (including favour last year, will be e keying, computerisation in govern-tion from France and West port wine), office machines and

Germany.



"They're a way of gaining prestige, and people know they're not handed out on a

1982 and £333m in 1981. Last

year Britain exported £397m to Portugal compared with £429m

David Royce: "A way galaing prestige." Certainly firms which have won awards are by no means backwards in coming forward and saying that they've

given by the kind of people who apply for them in a sector of the economy which is known to be one of the most efficient." But be did give a warning to

But be did give a warning to those who constantly pump out the "export or die" message to British industry.

"I think we must be balanced in our suphoria for exporting. Imports are also important, and certainly our standard of living would go down if these fell too dramatically."

If the Japanese can reward. If the Japanese can reward their importers, what about the

Mr Ray Skelton, secretary of the British Importers' Con-federation, has long ago resigned himself to the inevit-able. "I can't see anybody givahle. "I can't see anybody giv-ing awards to importers," he said. It gets a hit depressing at times, but I think that im-porters accept things as they are. However, we do aim to re-educate people so that they do not just think of the import-export business in black and white terms.

white terms.
"Some of our importers are probably amongst the most efficient businesses in the country. They provide the consumer with a wider range of products, and at lower prices. The importer is not a sogre he appears to be."

Fresh Tokyo

By Robert Cottrell in Tokyo

AUSTRALIA and Japan plan more talks on bilateral beef trade starting May 10, following the failure of a preliminary round last week. The fresh round of talks was agreed

over the weekend at a meeting in Tokyo between Mr Shinliro

Yamamura, Japan's Minister of

Forestry and Fishing, and Mr John Kerin, Australia's primary

industry minister, who arrived in Japan on Thursday. The talks "with Australia"

Australian

beef talks

Britain plans £275m Iraq credit line

BY CHRISTIAN TYLER, TRADE EDITOR

MORGAN Grenfell, the London These projects include water

to the bank, the protocol signed

MORGAN Grenfell, the London merchant bank, has secured the mandate for a £275m general line of credit that Britain is underwriting for Iraq.

The credit said to be the first of its kind for Iraq, is the result of an agreement by the Anglo-Iraqi Joint Trade Commission last autumn. According to the hank the profectal algand Morsan Grenfell said to had

Morgan Grenfell said it had

to the bank, the protocol signed them states that the loan can been appointed following its not be used for the purchase of lead role in last year's credit-military equipment to help larg prosecute its long war with neighbourging Iran neighbourging Iran neighbourging Iran construction contracts in which Some £25m is earmarked for British firms were involved commodity purchases, the rest Until recently, when the war began to take its toll, Iraq paid British companies stand a cash for most imports out of its British companies stand a cash for most imports out of its chance of winning major orders, substantial oil revenues.

Ankara company to build F16 assembly plant

BY DAVID BARCHARD IN ANKARA

TURKEY's state aviation cor the P-16s. poration, Tusas, has awarded a The new Ozal government is contract for TL 55n (£108m) to known to be privately less than Nurol, an Ankara based con delighted with the agreement struction company to build a with General Dynamics made

plant near Aukara for the in September last year, assembly of F-16 fightrs.

The award of the contract is last month set up a joint venture for the first clear signal that the ture to handle the project, now government is pressing ahead known as the "Tusas aviation with its \$4.2bn dear with and space industry corporation."

General Dynamics of the U.S. with an initial capital of to assemble and co-manufacture TL 250m (\$U.S. 1.1m).

WORLD SHIPPING REPORT Charter market edges up

FINANCIAL TIMES REPORTER FEW new charters have been to the Mediterranean at World-reported this week, but the scale 44.5 and a 138,000 ton market has firmed up slightly wessel went at Worldscale 38 as a number of transactions for the U.S.

have been concluded on a con-

Rates have tended to drop have been concluded on a con-Raiss have tended to drop fidential basis. for cross-Mediterranean and Of those fixtures reported, a Mediterranean-Europe cargoes, 220,000 tonne vessel was taken Worldscale 50 being paid for to Taiwan from Ras Tanurah at one tecent cargo to Europe.

Worldscale 27.75 while the pre- In the sale and purchase mium for loadings from Iran is market, there was a flurry of about 5 to 6. A fair volume has been our Greek owner purchasing three cluded out of West Africa A motortankers that have been 100,000 ton tanker was fixed laid up in Norway.

electric equipment, totalled
The restored competitiveness £476m, compared with £380m in

manufecturers put trade with in 1882—giving Portugal a trade Britain into the black for surplus of £79m.

Dresdner Bank worldwide

The first British prime min-ister to come to Portugal — lines, and modernisation of

- □ Total assets DM 160 billion
- ☐ Capital and reserves DM 4.5 billion
- □ Operating results exceed DM 2 billion
- □ Net income DM 380 million

The Dresdner Bank Group operates 1400 offices in more than 50 countries and employs a staff of 34 000.

Worldwide Consolidated Accounts

Dresdner Bank

follow the agreement reached between Japan and the U.S. last weekend to increase Japanese beef impures from the U.S. from 30,800 tonns annually to 58,400 tons annually over the next four years. Australia is anxious to secure an under-taking from Jepan that its own share of Japan's 141,000 tons-per-year total beef imports is not reduced.

Manila moves to stem imports

ment is negotiating a \$6301

standby credit.

The IMF facility is crucia
as it is expected to trigger the

By Emilia Tagaza in Manila IN A move designed to Philippine imports to "barest minimum," the Gover ment has imposed an addition 3 per cent duty, above ti exempt imports. Exempt in ports include those of Govern ment agencies or those orga isations exempted under speci

laws.
The additional duty is or of the conditions set by the International Monetary Fund IMF), with which the Govern

stalled negotiations with foreig creditors.

World Economic Indicators

	TRAD	E STATIS	TICS		
		Mar. '84		Jan. 84	Mar. '83
Japan Shn	Exports	13.95	13.73	13.42	11.63
	branorts	11,45	31.40	71,05	10.78
	Balance	+2.50	+ 2.33	+2.37	+1.45
		Feb. '84	tan, '84	Dec. '83	Feb. '83
UK Ebn	Exports	6.03	5.22	5.80	4.93
	Imports	_ 5.46	5.56	5.44	4.83
	Rafance	- F0.57	-0-34	-0.36	+0.0
U.S. Son	Exports	- 17.21	18.33	17,30	. 16.31
	Imports	26.15	26.59	22.98	18.81
	Balance	-8.94	-8.26	-5.68	-2.49
W. German DNb		41.15	36.56	40.83	33.10
v. deimai Dia	Imports	36.30	34.62	34.73	29.47
France FFrbn	Balance .	+4.85	+1.94	+4.10	+3.74
Tance PTTDI	Exports	62.80	68.59	67.64	52.77
	Imports	67.40	74.34	67.64	60.38
	Balance	-4,60	-5.46	8.00	-7.61
		Dec. '83	Nov. 33	Oct. '83	Dec. '82
Italy Lbn	Exports	8,575	10,766	10,353	7,530
	Enports:	10,011	10,48	10,781	6,700
	Balance	-1,436	+278	-428	-830

Britain's answer to the Krugerrand





HERNOR One troy ounce of solid Platinum — at little more than bullion price

BY ROYAL ASSENT britain's Isle of Main Treasurery has issued a new legal tender Bullon Cour to rival South Africa's Krugerrand as today's most cone troy ounce of 99.95 Fine Platinum, the new Noble is internationally recognised as a true Bullon Coin, and is priced, at little more than the daily rate fixed by the London Platinum Quotation. Ayrton Metals Ltd, and other authorised distributors, apply a minting said handling premium comparable to those applied to Krugerrands

Not surprisingly, the new Noble is already an obstanding success in Europe, where leading Swiss financial advisers have long been advocating that minimum of ten percent of capital be put into tangelie, tradeable bullion essets.

An outstanding dollar commodity for capital growth

The Nobles is traded internationally, and quoted in U.S. Dollars (as well as local currencies) in the national

other authorised distributors, apply a minting and handling premium comparable to those applied to Krugerrands

Not surprisingly, the new Noble is already an outstanding success in Europe, where leading Swiss financial advisers have long been advocating that a minimum of ten percent of capital be put into tangible, tradeable bullion essets.

An outstanding dollar commodity for capital growth.

The Noble is traded internationally, and quoted in U.S. Dollars; (as well as local currencies) in the national press and on T.V. data services. Platinum is a dollar commodity, so this offers valuable protection against a falling E. In recent years, Platinum has pereformed well in the market, and with world demand (notably in the automotive and other high technology industries) rising steadily, the outlook for capital growth looks particularly promising at this time. Obviously Platinum prices can fluctuate in the short term, but because production costs are high, prices are custioned against falling to a level too low to maintain a viable mining and refining operation. In fact, with the total output reaching the Western World at barely 70 tonnes a year (less than one fourteenth that of gold) a long-term surplus of Platinum is unlikely.

(less than one fourteeath that of gold) a long-term surplus of Flatimum is unlikely.

The growth that has seen the new Noble appreciate by 5.3% in only three months seems poised at least to continue, if not to accelerate.

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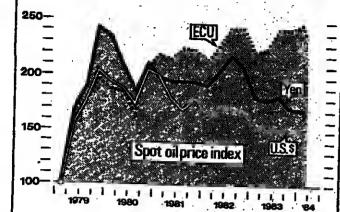
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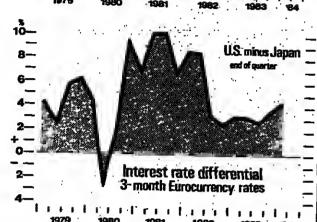
which will include details of our special introductory offer and all the detailed intelligence you need to assist your own appraisal of this important new investment opportunity, please write to: 1.0.M. Government. 60 Ayrton Metals Ltd. Dept. 81, 30 Ely Place.

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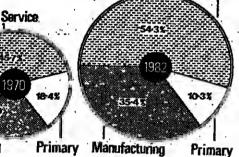
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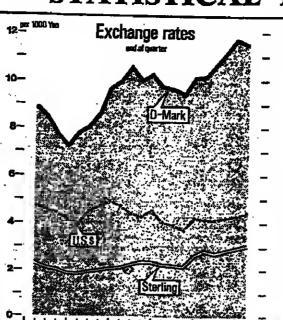


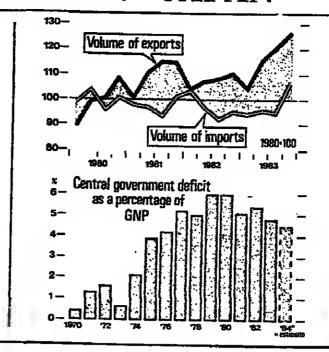


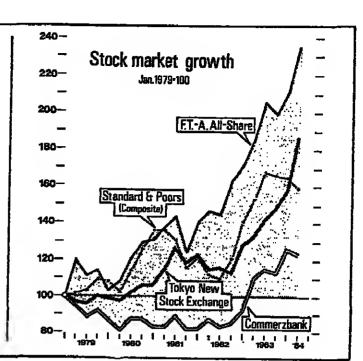




Service







Emphasis shifts away from exports

EXPORTS HAVE been a substantial contributor over the past decade to the growth of national output in Japan, and exportled growth again supported a recovery in 1983 helped by a boom in the U.S. economy and an upturn in world trade. Growth of gross national product at around 4 per cent is significantly higher than in Europe but is modest compared with earlier growth rates in the

Japanese economy.
A return to those higher

rates of output is unlikely to come from export growth, which may be limited by slow world expansion and trade restrictions. However, there is evidence of a recovery in domestic demand and increases in real wages and consumer spending should help to sustain the recovery.

Overall there is little change in the budget in nominal terms, but a further decrease in the deficit as a percentage of GNP.

Expenditure increases are planned in grants to local government, defence and service

government, defence and service

costs of government bonds.

Debt service represents about one sixth of central government expenditure.

Further progress has been made in reducing inflation to below 2 per cent in 1983, with real earnings growing at around 2½ per cent. However, real interest rates remain high, as do interest rates

real interest rates remain high, as do interest rate differentials with the U.S. The current account showed a hefty surplus of \$23bn in 1983 and is expected to grow to \$25bn this year. The net outflow on long-term capital, though, reached \$18bn in 1983,

Financial in

Individuals Business c Foreign

fuelled by the growth in the outflow of Japanese capital attracted by high interest rates, and against a background of dull domestic demand. The yen weakened considerably against the U.S. dollar in 1982, but recently it has recovered strongly. A stronger yen, together with stable oil prices, will enable the Japanese economy to take adrantage of the juli in dollar oil prices which took place in 1983.

The Tokyo Stock Exchange index has risen strongly since 1970, apart from a drop in

1974-75 which were years of particularly high interest rates. The strength of the yen in 1978 and 1980 is shown by the substantial returns to dollar investors in those years. The index has increased dramatically in 1983-84 and the strength of the yen against the European currencies has resulted in high returns for European investors.

European investors.
Although bankruptcies have increased, the economy is generating sufficient new businesses to balance the increase in bankruptcies, and surreys indicate on increase

in business optimism.
Industrial production is on
the upturn, and in the car
industry output has returned industry output has returned to an upward trend ofter two years of slight decline.

Although Japan continues to dominate the world shipbuilding rankings with about half of world output, production has halved in the last ten years olong with the decline in the industry.

Japanese steel output has fallen in each of the last three years, although not as steeply as the foll in world production.

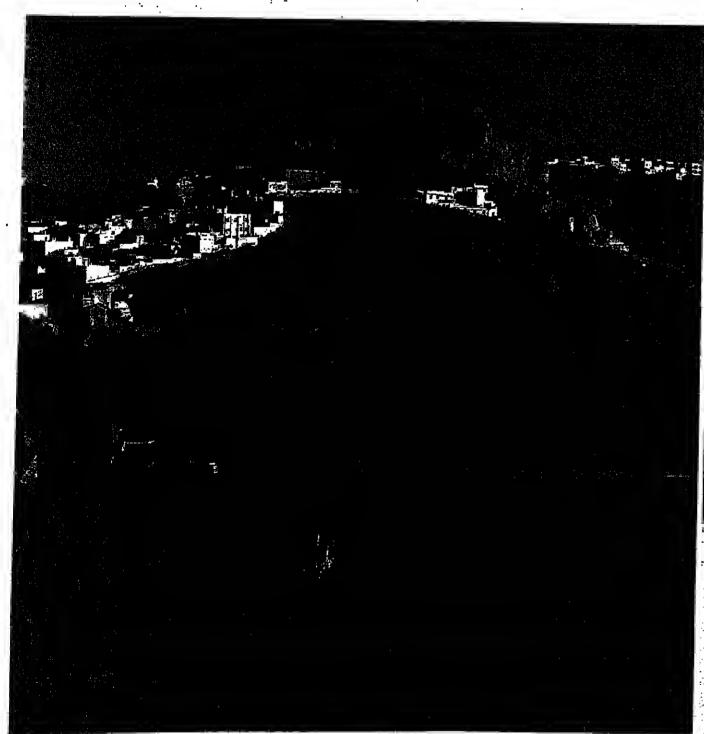
Earnings and Prices

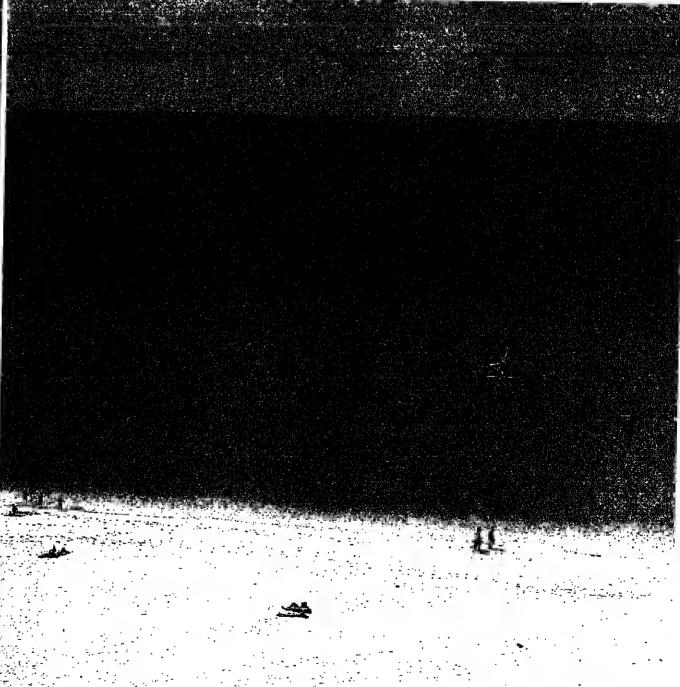
lada	strial Pr	eduction		Manu	facturing		
	% c	hange				Ships	
	U.S.	Japan	OECD- Europe		Passenger (000)	gr. tons	etre! tons
1975	8.9	-10.6	6.9	1973		(000)	(million)
1970	10.7	10.9	6.9	1974	4,476 3,936	14,752	119
1977	5.9	4.2	2.6	1975	4.572	16,896 16,982	117
1979	5.8	8.1	21	. 1976	5,028	15,868	102
1979	4.4	7.2	4.8	1977	5,424	11,708	102
1980	~ 3.6	4.6	0.3	1978 1979	5,976	6.308	102
1981	2.6	1.1	-1.9	1980	6,180 7,038	4,696	716
1982	- 6,2	0.4	-1.6	1981	6,972	8,400	111 102
1983	6.5	3.5	0.3	1982	6,888	6.164	99.6
				1983	7,100	6,700	97.2
		Sourc	e: OECD			Source	e: OECD
Bala	ace of P	ayments					
					\$m		
			7982	1983	198	4t	1985†
Imports Exports			19,297	112,510		2B2	137,516
rade b	ofance.	7	38,021 18,730	145,07	100	092	174,361
nvisible	s balanca .	_	9.890	- 32,561 - 8,704		810	36,846
ransfer	8	_	1.362	- 1,801	-	067 - 766 -	10,319
urrent	balance		7,489	22,250		977	1.960 24,577
xcinglin	oil bitt		53,458	61,861		314	67,424
	Cabiral						,
Forecas	(milow)		14,972	— 18,278	- 18,	882 -	15,769

Pers	onal Expendit	tre	Takyo	Stock Excha	nge		
	Tax and social security	Disposable		Index		Annual % rat	te of return
	% change			(average)	Yen	U.6.\$	£
1970 1975	8.2 8.7	91.6	1978	415.4	26	55	45
1976	9.6	97.3 90.4	1979	449.9	4	-16	-23
1977	10.4	89.6	1980	474.0	9	29	20
1978 1979	11.2 12.0	88.8 88.0	1981	551.5	17	9	36
1580	12.6	87.4	1982	547.9	6	~ 1	17
1981 1982	13.6 14.6	86.4 86.4	1983	646.9	23	27	41
So	urca: Prima Min	ister's Office				Sou	rce: Phillip.
Share	Ownership					GNP/GDP	
		%				U.S.	Japan
	_	1959-60	1969-70	1979-80	1982-83		

Ownership					GNP	/GE
	9					_
	1959-60	1969-70	1979-80	1982-83		_
nstitutions	21.7	30,7	36,9	37.7	1975	_
	47.8	41.1	30.4	28.0	1976 1977	
ops.	17.5	22.0	26.1	26.0	1978	
	1.5	3.3	2.5	5.1	1879	
trusts	7.6	1,2	1,9	1.2	1980	
os.	3.7	1.4	2.0	1.8	1981 1982	
pub, Inst.	0.2	0.3	0.2	0.2	1983 1984	
	Sou	rce: All-Japan	Stock Exchang	e Assoc.	1907	
						_

90		40	35	1974	27.	1	24.5
16		-23	-20	1975 1976	14.	5	11.8
29		20	47	1977	12. 6.	5	9.3
9		36	24	1978	6.		8.1 3.6
. 1		17	5	1979	6.0	9	3.6
27		41	45	1980	5.3 5.3		8.0
				1982	5.		4.9 2.7
	Source	r Phillips (end Drew	1983	4.0		1.9
_				1984t	6.4	5	27
/6	DP			† Estim		Phillips	end Dr
	U.S.	Japan	OECD- Europa				
	% g	rowth		Carr	ent Bala	nce	
	-1.2 5.4	2.3 5.3	-0.9 4.6			.S m	
	5.5	5.3	2.4	1973	- 138	1979	- 8,7
	5.0 2.8	5.0 5.1	3.0	1974	- 4,693	1980	- 10,2
	-0.3	4.9	1.3	1975	- 682	1581	4,7
	2.6	4.0	-0.1	1976	3,680	1982	7.4
	-1.6	3.2	0.6	1977	10,918	1983	22,2
	3.3	3.0	1,0	1978	16,534	1984	25,0
_	4.7	4.2	1.5	† Estima	ite.		
		Sourc	e: OECD			Phillips	and Dre
_		Source	E! OECD	500	rcer OECD,	Phillips	and D





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We could tell you of peaceful places all around Spain, but you'll have more fun finding them for yourself. Then they will become the places you will always remember most fondly, where there wasn't a zourist in sight. Except you.



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6

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> \$750,000,000 U.S. Treasury Bonds of 8-15-13/08

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RCA and Hitachi continue to **Insolvency** rules promote videodisc systems 'may deter BY JASON CRISP IN LONDON directors'

By Allson Hogen

THE INSTITUTE of Directors has given a warning to the Government that "honest and competent director will be deterred from joining companies if proposed reforms of

the insolvency law are passed.
"No amount of change to company law will eliminate rogues com-pletely, and it is essential that any egislation does not carry with it unfortunate side effects for bonest and competent directors," the institute says in its submission on the recent White Paper (policy docu-ment) on changes in insolvency

Tough penalties are proposed against directors of a company which is judged to have been wrongfully trading, including the automatic disqualification from being a director of any other company. The institute fee ties should apply only to controlling directors who have a majority equity stake in the company.

Directors will not be prepared to serve if, unlike other profe they are called upon to accept per-sonal liability not only without limit but also without proof of fault," it

It could result in skilful and careful directors no longer offering their services to companies in most need of them, "namely those whose vishility is in doubt.

Directors would also be under a personal pressure to ensure that companies were wound up at the first sight of trouble The institute says that this

completely at variance with the basic principle of a recent Cork committee finding on insolvency that a business should be kept going as long as possible.

with plans to promote the CED videodisc system in the UK in spite making players in the U.S. RCA Videodiscs, the UK subsid-

iary of the U.S. broadcasting pub-lishing and electronics giant, plans to spend over £1m promoting videodiscs in Britain this year and expects Hitachi, the Japanese elec-tronics group, to spend a similar amount. The company also plans to larnch 20 new titles a month.

In Britain the players are sold by
Hitachi, which makes them in Jayideodiscs are cheaper and slightly
pan. These players are also sold by
GEC under its own name. The discs
themselves are sold by RCA. The
CED videodisc system was
launched in Britain last October by
continue marketing CED videodiscs

Warning on

pirate radio

advertising

THE DEPARTMENT of Trade and

Industry (DTI), may write to com-panies which advertise on pirate ra-

dio stations warning them that they

The Independent Broadcasting

Authority has asked for tougher

measures against the pirates and

the DTI is joining the Home Office

in a co-ordinated campaign against

The IBA, which says it knows of

the existence of about 50 pirate stations in the UK, has forwarded a number of advertising company names to the DTL It is not an offence to advertise on pirete radio but the DTI believe such companies could be guilty of aiding and abetting the pirates in a breach of the Wireless Telegraph

If the DTI decides to move

against the advertisers it would be

the first such prosecution of adver-tisers on land-based pirate stations.

Yorkshire TV

to seek listing

YORKSHIRE TELEVISION plans

to seek a quotation on the Unlisted Securities Market (USM) in June

which will value it at about £20m.

been reducing its non-casino inter

ests, would make a 15 per cen

stake in Yorkshire available for sale

to investors for an estimated film. Trident has a further 15 per cent stake which is held by N.M. Roth-schild, the merchant bank, in an es-

crow account, for placing with local-

Trident initially held 100 per cent of Yorkshire and of Type Tees Tele-

stock market listing.

Trident Television.

RCA and Hitachi are to carry on RCA and Hitachi with a joint 12m in the UK. The company is expected with plans to promote the CED promotion. to make a full statement shortly bevideodisc system in the UK in spite

Mr Steve Bernard, managing di- cause of concern expressed by dealof RCA's recent decision to stop

rector of RCA Videodiscs, said: We ers which hold substantial stocks of will continue to support our hard- the players.

planned. We already have a very significant monthly release schedplanned. We already have a very significant monthly release schedule lined up for the rest of the year, and indeed one of our April releases Making of Michael Jackson's Thriller, is set to be a blockbuster on were delivered to dealers for the were delivered to dealers for the Isunch and only about 7,000 have

harmch 20 new titles a month.

RCA's sudden decision earlier this month to stop marketing and producing CED videodisc players in the U.S. after massive losses has led to considerable speculation that it also marked the end of the system in the U.K. In Britain the players are sold by the more sophisticated videodiscs are used it also marked the end of the system in the U.K.

In Britain the players are sold by the end of the system in the U.K.

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In Britain the players are sold by the end of the system in the U.K.

In Britain the players are sold by the end of the year and 100,000 in 1984.

Hitachi also has substantial think year and thought to sell 25,000 by the end of the year and 100,000 in 1984.

Hitachi and only about 7,000 have been seld. The two companies had hoped to sell 25,000 by the end of the year and 100,000 in 1984.

Hitachi also has substantial think year and 100,000 in 1984.

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Hitachi also has substantial think year and 100,000 in 1984.

Hitachi also has substantial think year and 100,000 in 1984.

Hitachi also has su whether Hitschr's promotion is aimed at clearing stocks or whether the company still has a long-term commitment to the market.

Peters Stores

Unaudited Group Results for the 26 weeks ended 24th December, 1983

£000 5,883 - £000 £000 10,305 Profit on trading 425 Surplus on property 2 152 161 Taxation Profit after taxation Francedinary Item closure costs Profit available for 32 £124 -- £112

Retailing profits continued to improve during the first half but sales in the early spring have been somewhat disappointing.
As usual the results for the full year will depend on the final

Our departmental store subsidiary, Issac Walton Limited, has d the first stage of its moder is showing an encouraging rise in sales and profits. The property subsidiaries, whilst not selling any devel in the first half, are very active with several potential achemes in the pipeline. All current developments are proceeding as planned and the Stadium Industrial Estate in Gateshead is only slightly behind schedule.

The Directors have declared an interim Dividend of 1.00 per 10p Ordinary Share (1983—1.0p) payable on the 11th June 1984 to Shareholders on the Register as at the close of business on the 10th May 1984.

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SERIES M-1986 DUE JULY 21, 1986 CUSIP NO. 313311 ME 9 Interest on the above issue payable January 21, 1985, and semiermually ther

12.50% \$883,000,000

Interest on the above issue payable October 20, 1984, and semiannually there

SERIES F. 1989 CUSIPNO. 313311 LA 8 DUE APRIL 20, 1989

Dated April 23, 1984

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90 William Street, New York, N.Y. 10038 Peter J. Carney President

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machine Jean Jene Salamp Baniving

CBI call to end pension

By Eric Short

THE CONFEDERATION of British Industry has called on the Government to discontinue the full indexa-tion of civil service and other public

indexation

It wants the Government to bring the protection of public service pen-sions in line with that given to private sector pensions which depends on the profitability of private sector

The CBI also rejects the Government's proposals on the early leaver problem - the loss of pension rights when an employee changes jobs.

The CBI, in its evidence to the Government's special inquiry into pension provision under the chair-manship of Mr Norman Fowler, Secretary of State for Social Services, accepts that pensions should be protected against erosion by inflation. But not at a cost that threatens the prosperity of the busi-

The CBI is opposed to the Government adding further burdens on state and occupational pension schemes, all of which have to be borne by the private sector. It points out that many employers do what they can to protect pensions in payment and the CBI is urging employers to woluntarily improve

But the CBI warns the Government that forcing companies to guarantee indentation of benefits would threaten the continued exisence of private sector occupational

The CBI also supports the con-cept of personal portable pensions. It wants employees to be able to opt out of the company pension scheme and set up their own personal portable pension, but only if the em-ployer and the workforce agree. It is opposed to the proposals put for-ward by the advocates of portable pensions that employees should have the right by law to opt out of the company pension scheme.

In general, the CBI wants to see more portability brought in gen-erally, but as a third tier on top of

Steady trend in pay deals

THE emerging pattern of April pay ments below 5 per cent seems to be creasing incidence of pay deals 2 or settlements shows little change fewer. IDS says, there is not a 3 percentage points above the rate from the trend through the winter steady upward drift.

The latest report of the research of inflation.

The report notes that the relative-latest report of the research of pay deals 2 or says, there is not a 3 percentage points above the rate of inflation.

The report notes that the relative-latest report of the research of pay deals 2 or says, there is not a 3 percentage points above the rate of inflation.

spread has risen.

to be conce It ascribes that partly to an in- per cent.

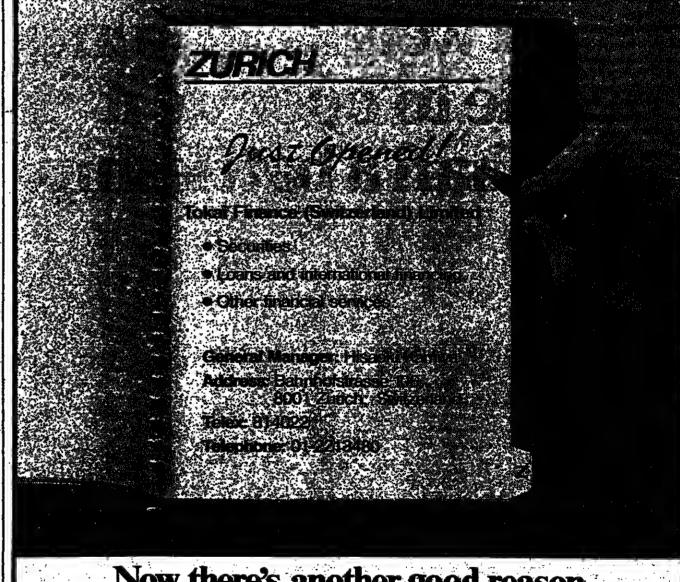
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UK NEWS

Senior Tories press for change in top party post

BY PETER RIDDELL, POLITICAL EDITOR

Selwyn Gummer should be removed from one of his two present posts - the chairmanship of the Conservative Party or Minister of State at the Department of Employ-

ls

These warnings from senior members of the executive of the Conservative backbench 1922 Committee reflect grumbling among MPs about Mr Gummer's performance as party chairman. He is felt to have lacked the authority and punch of Mr Cecil Parkinson, his predecessor, who stepped down last year shortly before admitting that he had had a love affair with his secretary, who was expecting his

The senior Tories are believed to have argued that the change should occur within the next few months. Criticisms have been dismissed by some of the Conservative parliamentary leadership as the predictable carping of certain former party office holders who were dishes ed or who never combined their will lose one of his two jobs, prob-party posts with ministerial office. ably in the expected September Nevertheless, the complaints ministerial reshuffles. Much may against Mr .Gummer are .. wide-

SENIOR CONSERVATIVE MPs of insufficient weight Some MPs May 3, and in the European electrone advised Mrs Margaret Thatch-have argued that Mr Gummer tions on June 14.

Ought to be counterattacking more Mrs Thatcher apparently still against Labour in weekend speeches and on the media.

Even some senior ministers concede that the combination of the two jobs has not worked out, though they argue that in part this is not Mr Gummer's fault since the problems have resulted from special circumstances when he burriedly succeeded Mr Parkinson.

At the time, however, Lord White-law, the Leader of the House of Lords, privately argued that it would have been better to have opted for the traditional arrangement— whereby the party chairman holds a non-portfolio ministerial post. possibly outside the Cabinet, such as Paymaster-General:

This is now the view of several Cabinet ministers. But a snag is that unlike Mr Parkinson, Mr Gum-

depend upon how he and the Tory spread, coming from both senior. Party perform in the three forth-and new MPs. They vary from coming parliamentary by elections charges of disorganisation to those and the local council elections on

Mrs Thatcher apparently still thinks highly of Mr Gummer as a rising member of her Government although she may be reluctant just yet to promote him to the Cabmet ahead of other promising middlerank ministers

Defenders of Mr Gummer argue that the critics are unfair since he has been very active behind the scenes at Conservative Central Office and that he has been vigorous in the row with the BBC over the Panorama programme alleging farright infiltration of the Party.

Moreover, until recently, Mr Gummer has been tied up two days a week in the House of Commons on the Trade Union Bill, but this has now completed its committee and report stages and he should have more time for party matters. The argument about Mr Gum-mer's role ties in with criticisms by give up a ministerial salary.

The general expectation among senior Tories is that Mr Gummer will lose one of his two islands. garded as too self-effacing to act as an effective channel between backbenchers and the Prime Minister. though he has been seen more frequently at the Commons in recent

weeks since the criticisms were

Alexander settles with former directors

By Alexander Nicoli

ALEXANDER & Alexander Ser vices, the world's second largest insurance broker, has settled with four out of five former executives who it accused of misappropriating \$55m (£38.5m) from its British subsidiary, Alexander Howden.

Mr John A. Bogardus, chairman of the U.S. company, said: "We are satisfied with the outcome of this matter. Not only have we gained certain assets, but this agreement also results in significant savings of management time and money.

Mr Ian Posgate, a former note Howden underwriter, is not a party to the accord, and Alexander & Alexander is continuing litigation against him After the purchase by Alexander

& Alexander of Howden in 1982 for about \$300m, it alleged that the five executives had misappropriated up to \$55m by diverting money into companies they secretly controlled. The U.S. company took an extraordinary \$40m charge against earnings in 1982, although it recov-

ered \$26m of the lost funds The four former officers and directors who have settled are Mr Kenneth Grob, former Howden chairman, Mr Ronald Comery, Mr Alan Page and Mr Jack Carpenter,



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N.V. Beleggingsmaatschappij Wereldhave

Shareholders' Meeting

هكذا حد الأهبل

NOTICE IS GIVEN that the Annual General Meeting of Shareholders of the Company will be held at the Promenade Hotel, 1 van Stolkweg, The Hague, The Netherlands at 11.00 a.m. on Wednesday, 2nd May, 1964.

Opening Report of the Board of Management Annual Accounts for 1983

Approval of the proposed dividend per share of Dil. 9 in cash Appointment of Members of the Supervisory Board in accordance with Article VI.2, Section 2 of the Articles of Association the following directors are to retire by rotation: [Jf. Visser

J.M.G. Hoes
Messrs. Visser and Hoes are available for re-election.
The meeting of priority shareholders proposes the appointment of.
J.F. Visser—J.A.E. Koming
J.M.G. Hoes—Mrs. H.J.M. van Bortel
Questions before closure of the meeting
Closure of the meeting.

Shareholders' Rights

Shareholders' Rights

Shareholders and usufructuraries with voting rights who wish to attend the meeting have to deposit their shares or deposit receipts from an institution as defined in Article VIII.6, Section 2 of the Articles of Association on or before 28th April, 1984 at the office of the Company, 23 Nassaulaan, The Hague, or at the offices of Pierson, Heldring & Pierson N.V., Algemene Bank Nederland N.V., Cooperatieve Centrale Raiffeisen-Boerenleenbank B.A., Bank Mees & Hope NV, Credit Lyonnais Bank Nederland N.V., Kempen & Co N.V. in Amsterdam, Rotterdam, The Hague and Urrecht, in so far as there established, or at the offices of Morgan Grenfell & Co. Limited, New Issue Department, 21 Austin Friars, London EC2N 2HB, where arrangements may also be made for voting by groxy.

Annual Report 1983

Copies of the Annual Report (in English) may be obtained in the United Kingdom from Morgan Grenfell & Co. Limited, New Issue Department, 21 Austin Friars, London EC2N 2HB or from Hoare Govett Limited, Heron House, 319: 325 High Holborn, London WC1 TPB on or after 13th April, 1984.

By order of the Supervisory Board

William Press losses inquiry out this week

nesday by Amec, the international results of this inquiry, which contin-civil engineering grouped formed 18 months ago through the merger of Press and Fairclough Construction.

Amec will also reveal the terms of a severance compensation deal agreed with former William Press the new group's main board before resigning last year.

by Price Waterhouse which has tion was to change the concept of been appointed to replace Arthur the Amec merger. What had origi-Andersen as joint auditor to Amec nally been described as a "partnerwith Armitage & Norton. The inqui-ship of complementary businesses with Armitage & Norton. The inquiship" of complementary businesses by began after the discovery in January last year that Press's Haver of Press by Fairclough, ton Hill Fabrications subsidiary. "A new executive board was conhad made operating losses of C7.7m stituted to ensure adequate controls in 1982 and would require a further and performance monitoring £4.3m to cover closure and rational throughout the group. As Sir Oswald told shareholders last year. Haverton's contract losses, independently reviewed at the time by Price Waterhouse, meant that

clough, said last June that he was. When the merger document was "extremely disappointed with this drawn up, it disclosed that Mr Wil-

THE RESULTS of a worldwide in-include the whole of Press's intervestigation into the affairs of Willinational engineering contracting am Press will be unveiled on Wed-activities. Amec will announce the

> The scope of the examination, Amec believes, is comprehensive although the scale of any further con-

Press's profits fell in 1982 from the top Amec board have since left C7.5m to £752,000 before tax which, and Amec has now negotiated what after all charges, led to a £7.5m loss, Sir Oswald Davies, the chairman tion agreement which will be accof Amec and formerly bead of Fair ceptable to its shareholders.

result," even though the Fairclough ham Hawken, the deputy chairman side of the merger was growing. of Amec, had signed a service constrongly with a 32 per cent increase tract on May 14 1981 which was term pre-tax profits to £17.8m in 1982 minable by Press on or after May Price Waterhouse's investigative 14 1986. His annual salary in 1982 brief was consequently widened to was £38,600.

executives who served briefly on tract provisions is not thought to match the provisions required at Haverton. An immediate conse-

The investigation was conducted quence of the Haverton investiga-

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UK NEWS

European public sectors urged to speed job creation

BY TIM DICKSON

BRITAIN MAY have the highest the joint project between the Dutch number of unemployed of any country in Europe – but it can also boast vate British company Job Creation create new jobs.

Based on the evidence of several recently researched case studies, a new report from the Economist Intelligence Unit urges more local and regional authorities throughout Europe to encourage the expansion of existing and the creation of new

"Unless the public sector recog-nises that the claims of local action are such that public funds should be provided as the mainstay of support, then local action will peter out in a few years," the report says.

This would require "a willingness in most countries of Europe to acknowledge that such funds are more effectively spent in that way than in expensively persuading in-visible investors that there is only one place in Europe worth investing in - the town or city doing the

The report considers the history of projects in the UK, the Netherlands and France, including UK enterprise agencies, British Steel Corporation (Industry), the job creation arm of the steel corporation, and

a leading role in local initiatives to to alleviate the effects of a major closure in The Hague.

The Philips project "shows that a prime sponsor, private in this case but public sector in others, . . . can make a real contribution to the.

A bold commitment moreover, induces others to join the scheme for as the report points out, an initially sceptical municipality of The Hague bad now asked Job Creation to develop a second enterprise centre for

The study suggests that commu-nities, local authorities and local employers may be surprised by the energy, talent and initiative lurking in even the most depressed areas. But it was crucial that objectives were clearly defined. For example, new companies should not be help-ed to put others out of business by producing a product or service for which there was already adequate local supply.

EIU Special Report No. 165. Creating New Jobs in Europe; the role of local initiatives. Spencer House, 27 St James's Place, London

Ian Rodger analyses the prospects for the manufacturing sector

Managers hardened by recession

these days for what are euphemistically referred to as smokestack or
sunset industries, especially in a

of industrial managers, is making Conservative government en the restoration of thralled with microchips and fast all base possible.

about the importance and prospects of heavy manufacturing industries in Britain's future.

"I believe manufacturing will al-ways be the basis of wealth crea-tion in this country." Mr Butcher said in an interview last week. Is this a genuine statement of be-

lief, or is he just making a virtue out of necessity, given his special ministerial responsibilities for the shattered West Midlands?

The former computer industry executive chuckles, but insists that be really believes it. "Manufacturing matters, and engineering mat-

Manufacturing industry, especially engineering, is about to become fashionable again, he claims. Busismen will soon invest in manufacturing with at least as much enthusiasm as they now invest in service industries, because that's where the big profits will be made. Employment in manufacturing in Britain, which has dropped dramatically in recent years, could even start rising again at some point. Mr Butcher believes that a con-

en- the restoration of Britain's industri-

"The traditional sectors have But Mr John Butcher, the junior been dominated by people who had Industry Minister, has suddenly be-five more years to go,' and people come aggressively enthusiastic in that position don't tend to think about long term investments.

"The recession has seen off a lot of them. Their companies have been either bought out or put in receivership, but one way or another. their order books have been passed on to a new kind of manager-direc-

"Typically, he is 35 to 45, he is professionally trained, he is bright, he's tough and he's very angry and hungry. He has survived the recession and he is determined to do some damage in the home and international markets."

These managers are arriving, he says, at a time of great upheaval in manufacturing technologies, with new methods of design, new materials and new factory techniques becoming available every day. Many hold out the prospect of significant improvements in productivity and

He acknowledges that many British manufacturers are well behind their overseas competitors in the application of new manufacturing technologies, but argues that change is occuring at such a rapid

THERE ARE NOT many backers junction of factors, mainly new rate that the opportunities for them to get back in occur very frequently. Catching up-implies the use of a lot of engineering expertise, and Mr Butcher speaks of a "huge national intellectual effort already under

> And that, in turn, is helping to im-prove the status of engineers. They're in short supply now, and if the labour market works in the nor-mal way, then graduates in the new engineering disciplines are in for a substantial pay rise."

This series of trends favouring a renewal of manufacturing is fortu-nate, Mr Butcher argues, because Britain has little choice but to redevelop its manufacturing industries if it is to maintain its living standards when the oil surplus disap-

The service industries make a much larger contribution to the economy and to employment than manufacturing ever will.

But only 18 per cent of services are internationally tradeable in-cluding insurance and banking. whereas 80 per cent of manufactured goods are internationally

He points out that the proportion of Britain's GDP coming from manufacturing - 23.4% - is lower than that in West Germany (34.6 per cent), Japan (30.6 per cent) or France (27.6 per cent).

again when the best returns will be made in the manufacturing sector. the jobs front. I think those who say structural change is here foreve fundamentally misguided

They're simply taking the more malign trends of the last three year and projecting them forward for ever in the same way as their equal-ly misguided counterparts in 1934 projected the trends of the period from 1930 to 1934."

Given his optimism, Mr Butche does not see the need for massiv government intervention or diri

"If we were suffering from hardening of the arteries, then it is not a blood transfusion that is needed but some vitamin E to improve the

. That is the rationale behind most of the Government's programmer for industry. Some aim to show managers how to use new technolo gies, such as computer aided de sign, others help them buy robots

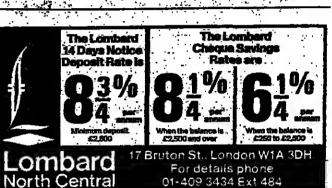
right approach. The closest h would come to dirigisme would b to focus some programmes more sharply to indicate what industries the Government wants to see devel-



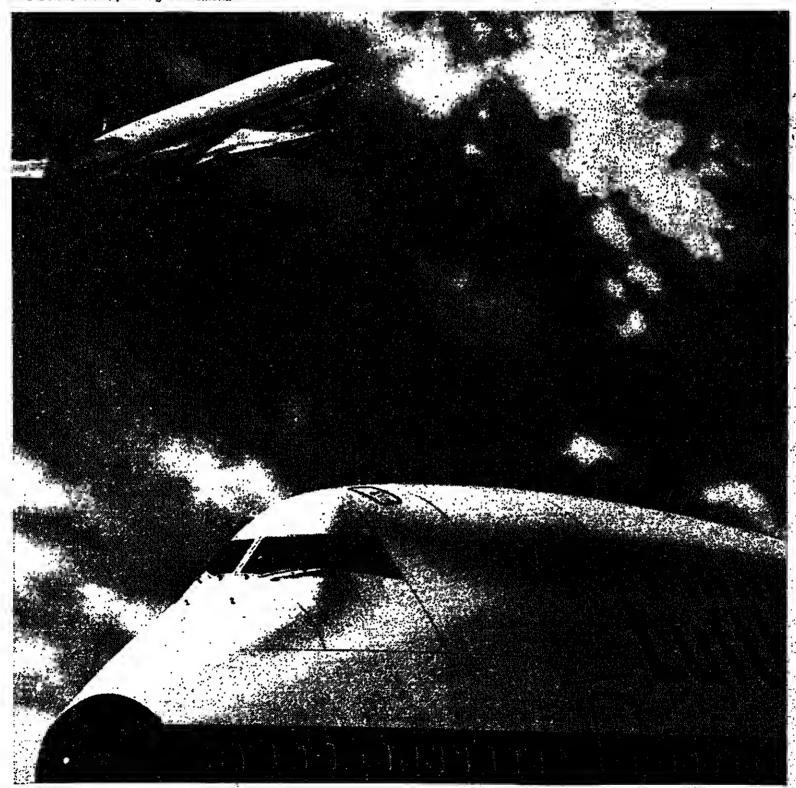
Telford's Enterprise Zone is sited alongside a motorway, next to a major shopping centre and surrounded by the attractive Shopshire countryside. There are sites immediately available for indus-trial, warehouse, in-technology office and hotel developments—all with 100% capital allowances and 10 years rate free from 13 January 1984. Now that the Chancellor has reduced building

allowances for everyone outside an Enterprise Zone (and paved the way for further reductions) ours looks





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AYEAR OF ACHIEVEMENT AND PROMISE.

been recognised internationally as a centre of surgical advance, and we are now able to set up an ICRF research unit there, based on the already well

established Departments of Surgery and Pathology.

Of particular interest to our investigators is

bowel. The unit will inevitably be small compared

with the Breast Unit for some time to come, but we

Our close proximity to the Royal College

of Surgeons has not always been exploited to the full. Now, however, we are embarking on a joint venture

We are setting up a shared facility which will

offer a reference service for rare and obscure tumours as well as providing a spring board for the research applications of new methods of investigation.

SIR THOMAS GORE BROWNE -TREASURER COMMENTS:

The restoration of our finances to a more

which occurred last year, has enabled us to review and plan the implementation of a number of new

plans for expansioo which will require capital

£2.5 million, the endowment of a Professorial

Oncology Unit at Guy's Hospital School for £2.

million to our annual expenditure.

our new advertising campaign.

expenditure in the order of £6.25 million over the

next three years and which will ultimately add £1

These include the construction of an addi-

oonal laboratory block at South Mimms at 2 cost of

million, the establishment of Units withio St. Marks

Hospital and The Royal College of Surgeons £435,000, and further development of our site in Lincoln's Inn Fields which will amount to £1 million.

That we have had a successful year is made

The decision to invest substantial resources in

clear not only by a 17% rise in our total income from £18.8 to £22 millioo but hy the very positive

response that we have received from the public to

developments and projects which could require

a lifetime of financial support is a fine judgement

acceptable balance between Income and Expeoditure

projects, and some of those which had been temporarily

The Council of The Fund have now approved

in the field of histopathology, once the starting-point of most cancer studies but now sometimes

pushed into the background by other expanding

will hope to see it develop.

the hereditary element found in some cancers of the

Everything we do has to be paid for. and our recurrent expenditure will rise dramatically over the next two years. The money has to be raised by our own efforts - every penny of it. We get no State aid whatever, and depend entirely on the support and generosity of the public.

Angus Ogihy.

DAVID INNES WILLIAMS - CHAIRMAN OF COUNCIL REPORTS SIGNIFICANT ADVANCES.

The year 1982/83 has been an active and successful one for ICRF, a year both of achievement and promise. We have been able to present significant advances in our understanding of cancer, as well as in the prospect of cure, and we have had the opportunity, through the generosity of our benefactors, to initiate some very important new projects, which we can confidently predict will bear

NEW LABORATORIES.

Our major huilding project, the new labora-tory at Clare Hall, South Mimms, is proceeding apace: the first phase will be ready for commissioning in September 1984 and plans for the scientific work to be undertaken there are well advanced, complementing the research carried on in Lincolo's

Last year I was able to annouoce our intention to open a new unit in the Dominion House Laboratories at St. Bartholomew's Hospital to study viral and cellular oncogenes. This is oow fully operational and holds great promise.

CLINICAL RESEARCH

The Breast Unit at Guy's Hospital has always been amongst our most successful veotures. Initially concerned essentially with surgery and radiotherapy, the unit has also included medical oncologists whose interests have widened to include cancer in other sites as well as leukaemia. We have now decided therefore that the time has come to put the whole of cancer research in Guy's on to a souod footing, as part of the Medical School, as well as in the Hospital.

Accordingly, we are devoting a large sum of money to the endowment of a Professorial Chair of Oncology which will be concerned with research into the medical and radiotherapeutic control of cancer as well as incorporating the surgical work already undertaken

Colo-rectal cancer is almost as commoo as breast cancer, and we have always felt the need to extend our research endeavour into this area.

CHARITY ACCOUNTS.

the media and the accountancy profession concerning standards of charity reporting. The Accounting Standards Committee of the Institute of Chartered Accountants in England and Wales is due to publish its recommendations shortly. It has always been our policy to present our Annual Report and Accounts with sufficient information to evaluate the worth of

This is, in no small measure, due to the unceasing efforts of so many unpaid supporters and helpers in the country to whom I offer my sincerest thanks.

the extensive nature of studies undertaken in the

He explains that the work of a cancer research institute must range from quite fundamental studies on the way that genes work, using the most appropriate model system whether it be a bacterium or a human cell, to applied studies such as on the relationship between diet and cancer, or on the best combination of drugs to use for chemotherapy.

Dr. Bodmer believes that ICRF must always seek to maintain a balance of work in different areas, feeding the applied end with fundamental advances, taining momentum at the forefront of applications. For example, a major aim for improving the treatment of cancer is to find ways of attacking the cancer cell more specifically, without damaging normal tissue to anything like the same extent.

One way to do this is to attach a poison to a nonocional antibody that reacts specifically with cancer tissue and hardly at all with normal tissue, and these systems are being made to work in the laboratory. The challenge now is to make this

Concluding with a tribute to the public whose generosity sustains us, he confidently reports progress in all these areas with a conviction that ICRF is in a position to seek new opportunities and

It is only through careful planning that we can now undertake capital expenditure of £6.25 million.

There has been much debate both within

in as clear and concise a manner as possible whilst trying to ensure that the donor is presented

In conclusion, we can justly claim that our Appeals expeoditure, which this year is 5.1p of every E received, is as low as any in the charitable field.

DR. W.F. BODMER - DIRECTOR OF RESEARCH.

In his statement to the Governors, Dr. W.F. Bodmer, FRS, Director of Research sets out

approach useful in the clinic.

One of the striking features of present day ancer research is the way that modern understanding and ability to manipulate cells, their geoes and their products has made the relationship between fundamental and applied research closer than ever before. It is also essential that cancer research takes advantage of modern technology; a genetic engineering laboratory for example is incomplete without direct access to computing

giveo the inevitable uncertainty of our source of funds. We spent £15.6 million in the year under review prevention and cure of cancer.

UK NEWS

David Hellier looks at the Zola Budd case

Athlete takes the fast lane to British citizenship

THE DECISION to grant British citizenship to Miss Zola Budd, the 17-year-old South African athlete, within 10 days of her applying for it, highlights the arbitrary way the in which wide discretionary powers under the 1981 British Nationality Act can be used.

More than 82,000 people acquired citizenship of the UK and Colonies in 1982, the latest figure available.

Most of those applications would have been processed in one to three.

In a House of Commons reply last November, Mr David Waddington, Home Office Minister, said that when there was an entitlement to citizenship, the average time taken to process applications was 13 months. For those which were discretionary, the time taken was rather longer; on average, 21

In the House of Commons last week Mrs Margaret Thatcher, Prime Minister, replied to Labour opposition complaints that the Govopposition complaints that the Cov-ernment had unfairly given prefer-ential treatment to Miss Budd. She said the applications had been pro-cessed with speed so that Miss

Zola Budd won her first end, setting a UK junior 3,000-metre record of 9 minutes 02.6 seconds at an event

nationality to minors, irrespective right to critzenship, although here of where they were born or the nationality of their perents or grand-can be invoked.

Police would normally take about three months to decide on charac-

the UK Immigration Advisory Service, said that under any other sections of the Act, spart from 3 (1), Miss Budd normally would have

years ending with a date not later than the child's date of birth.

In Miss Budd's case, although her father is British by descent, he has not lived in Britain and would therefore not satisfy section 3 (3).

The 1981 Act also stripped minors born in the UK of their automatic

Someone who does not qualify for automatic entitlement may still be entitled in citizenship so long as during each of the first 10 years of that person's life, the number of days on which they were absent from the UK did not exceed 90.

Under section 1 (7), however, would be whether the applicant in the UK did not exceed 90.

Budd's application had to be pro cessed quickly if she were to stand a chance of running for Britain in the Olympics, it also had to be done before her 18th birthday, which is next month.

Budd could be considered for the British athletics team for the Los For example, under section 3 (3) secretary of the Joint Council for Angeles Olympics.

Miss Budd's application was granted under Section 3 (1) of the Nationality Act, which allows the Home Secretary discretion to give the UK exceeded 270 above thousands of people whom during an arbitrary period of three she felt had more deserving cases.

Brokers see gains for economy

BY PHILIP STEPHENS

ment's decision to stimulate the per cent a year since the beginning ductivity would continue to limit economy in last month's budget, of 1983.

Stockbroker Phillips & Drew said. The perception that much of this. At the same time, however, in-

THE PROSPECT that further that all the signs pointed to the rap-strong productivity gains might id pace of productivity growth being view of inflation prospects.

While average earnings growth on inflation lay behind the Govern-facturing had risen by an average 6

was still fairly buoyant, better pro-

In its latest review of the outlook, the economy rather than simply a growth in the economy for any giv-for the economy the broker said cyclical upturn had allowed the en level of unemployment.



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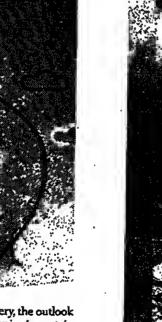


Contrary to the prevailing caution about the economic recovery, the outlook looks very bright indeed for well managed, vigorous companies in certain sectors. We watch them closely and have developed a distinct flair for finding the market features ahead of the competition. And we're not afraid to realise profits. PAUL HILTON, U.K. MARKET FEATURES FUND MANAGER.

Japan seems set for an explosion. Look for the best returns in domestic growth rather than traditional export sectors. performance will be achieved by ranging widely across the market. We're ideally placed to do just that: we have on-theground experience and personnel in Japan that no-one can beat. STEPHEN BARBER JAPAN PERFORMANCE FUND MANAGER



Gold looks set to go up. And remember, gold shares considerably outperform a rising gold price. We are very well placed to make the most of this with our broad experience of investing in gold shares, not only in South Africa, but also in more specialist areas of North America



Above are the informed opinions of four fund managers of the newly established Montagu Unit Trust

Managers Ltd. Each opinion is backed by a wealth of individual experience, proven flair and a fresh, enthusiastic approach to the market.

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R.

We have that conviction. But it is not only based on the skill and experience of the fund managers.

It comes also from the knowledge that the new Funds have behind them the enormous resources and consistent success of Montagu Investment Management Ltd. As well as the solidity of one of Britain's oldest and

most respected merchant banks, Samuel Montagu. Naturally, those deep resources defined the first funds.

Montagu has, for example, been one of the most respected names in the Gold market for over a century; the perfect platform for a fresh, enthusiastic team to build an aggressive winning Fund.

The association with Japan similarly goes back a long time and today we have a higher representation in Japan than almost any other financial house in Britain.

Montagu Investment Management has also been



managing money in the US for many years and has invaluable links with the largest quoted American Insurance Company.

While in the UK Montagu's connection with growing and successful companies in every industrial sector is almost as old as the bank itself.

Each fund will have its own personality and its own investment policy. But they all share a common philosophy: the funds must be as free ranging and flexible as they need to be to maximise investment opportunities for their clients.

And as anyone in the City will tell you, you cannot range freely or be flexible unless you have that solid base of knowledge and intuition that Montagu Unit Trust Managers Ltd. possesses.

Write to us and we will send you full details on the new funds.

Or phone Bill Ramsbotham on 01-626 3434.

Lords reverse extradition treaty practice

ing lawyer can recall it bas country and the reluming country and the reluming country been the practice of governbeen the practice of governments with which Britain has treaties of extradition, when requesting this country to surrender a fugitive crimical to stand bis trial abroad, to call able foreign penal law.

The Bow Street magistrate, who initially has to determine wbether the fugitive criminal to have an expert in the releelbow to guide bim through the thickets of an alien legal system. Such expert evidence has been necessary to prove the crown courts of England. that what the fugitive criminal criminal according to its own law but also a crime that is substantially similar in one or more of the extraditable crimes listed in the Extradition Act 1870, as amended from time to time hy subsequent treaties.

Exception

In future, following a House of Lords decision last week, it will only he necessary for the Bow Street magistrate to have regard for foreign law if the treaty of extradition or any supplementary treaty adda to the list of extraditable crimes in qualified terms.

Treaties often specify that extradition may be granted for Mr any other crime recognised by loans

called, is applicable. then specifically

This exception apart, in the ordinary case of a fugitive criminal accused of en extraditable crime the magistrale in expert evidence on the applic- London is unconcerned with what provision of foreign criminal law is stated in the warrant to be the offence of which the person is suspected and for should be surrendered, has had ordered in the foreign state. The magistrate's sole function is to have an expert in the text.

vant foreign law sitting at his to hear the evidence which is want foreign law sitting at his adduced in respect of the English extraditable crime and deal with it as if he were bearing a case for committal for trial in

That is the essence of the is accused of having done in Lords decision last week in Re the foreign country is not only Nielsen,* which dramatically reverses an unbroken line of literally hundreds or thousands of extradition cases beard by Bow Street magistrates for more than a bundred years.

Mr Bonde Nielsen bas been charged by the Danish authorities with fraudulently abusing his position as controlling share-holder of a Danish company to rescue another company under bis control from severe financial difficulties. The means alleged to have been employed by Mr Nielsen were to cause the first company to purchase certain shares from the second at an inflated price and on onerous terms, the purchase price being 100m Danish kroner nearly 1 (£7,25m).

Mr Nielsen then advanced

have not been repeid and the of the crime of burglary.

Even if the laws of Parkers of the capital invested in the laws of Parkers of the capital invested in the laws of Parkers of Parkers of the laws of Parkers of Parke of the capital invested in the

purchase of the shares. Mr Nielsen was arrested on a werrant end accused of the crime in Denmark of "fraud by a director of a company." This was translated into English criminal law terminology as "obtaining property by fact that the suspected burglars deception." The Chief Metro-might be returned to Ruritania politian Magistrate heard and be convicted of the crime evidence on Danish law and con- without the Ruritanian proseinvolved a narrower concept tban was involved in any comparable English offeuce, and that since the offences under the two laws were not sub-stantially similar he felt compelled to discharge Mr Nielsen

as matters stood. Subsequently the High Court reversed the Magistrate'a decision, and that has now been upheld by the House of Lords.
The case goes hack to Bow
Street for the magistrates to
continue bearing the unfinished evidence which the Danish Government wisbes to produce.

Acquittal

How doea this reversal of a long-standing and invariable practice affect the process of extradition? Suppose some so long as the request was for individuals entered a public him to stand trial for murder. office in the capital city of The general principle of Ruritania by producing a valid international law is that in all

A revolution in the analysis of metals: inductively coupled plasmo source (I.C.P.) spectrometry.

FOR AS LONG as any practistic the laws of both the requesting struggling company, without to be by way of trespass. Under returning state. Absolute ing lawyer can recall it has country and the returning state. Absolute to be by way of trespass. Under returning state

and England on the crime of burglary were sufficiently similar so as to comply with the pre-Nielsen law, from now on the law of burglary in Ruri-tania would be irrelevant; the English magistrate would be wholly unconcerned with the fact that the suspected burglars cluded that the Danish offence cution having to establish that they were trespassers. If they were to be tried in England, the failure tn establish that they had entered premises as tres-passers would mean an acquittal.

> of e charge of murder in Ruri-If applications were made for the criminal's return authorities could get their man so long as they could persuade the English authorities that any other extraditable offence other extraditable offence—such as theft—had prima facie beeu committed. The fact thet there was insufficient evidence to convict for murder under Ruzitanian or English lew would not prevent the fugitive criminal from being returned to face his trial for murder, so long as the request was for him to stand trial for murder.

Take a more extreme example

pass, but then proceeded to cases of extradition the deed steal some confidential docu-done, on account of which exments. Ruritanian law bas a tradition is demanded must be
Nielsen then advanced crime of burglary but entry to considered a crime by the
to the financially- the place burgled does not bave laws of both requesting and

ter of the deed must be the same and mede criminal by both laws. Nielsen's case has position which will apply in the future only where the relevant extradition treaty specifically qualifies the exclusive regard by English law. English municipal law rejects the inter-

Revision

No one nowadays believes that the courts do not make, but only declare the law. But if judges are bound to develop and even change the law they are usually careful not to turn themselves into legislators. Where everyone had proceeded for decades on the assumption that the law was X (even if it was erroneous) it is surely a matter for parliament to consider and if necessary to effect any change.

Extradition law, which has not been altered materially since the 1870 Act, is in need of urgent revision. Two years ago a Home Office working party produced a detailed report, pointing up some of the defects. There is also e European Convention, to which this country is not a party. The public con-cern aroused by the House of Lords's decision in the Nielsen case should at least stimulete debate if not actually provoke Times Law Report, April 13

1984

Justinian

Rise in underwriting losses last year offset by more investment

THE MAJOR quoted British insurance groups have now all reported their general insurance results for last year. The predictions early in 1983 that it was going to be an even worse year than 1982 have been borne out, even though there were relatively catastopbes.

However, the deteriorating worldwide underwriting losse were more than covered by an improvement in investment income, in sterling terms, end higher life profits. The overall result was that net profits for 10 major companies showed a 15 per cent increase, with sharebolders getting a 14 per cent rise on average in their 1983 dividend payments.

The table shows the aggregate results for last year of these 10 groups — Commercial these 10 groups — Commercial Union, Eagle Star (now part of BAT Industries), General Guardian Exchange, Legal and General Pearl, Phoenix, Prudential Cor poration, Royal Insurance and Sun Alliance.

Overall underwriting losses rose 9 per cent from £950m to £1.04bn, the main contributions to these losses coming from Britain and the U.S.

The U.S. has been a poo insurance market for the past few years and conditions have been getting steadily worse.
Overall underwriting losses
have risen from £362m to
£491m, with the Commercial Union contributing £245m.
Trading conditions remained

AGGREGATE RESULTS FOR THE 10 MAJOR UK INSURANCE

	A Section 1	GROOFS			
- 4-		1983 £m	7	1982 £m	Change %
Underwri	ting				
UK US.		—274.6 —490.9		-3147 -362.4	
Cana	.	—-35.3		-48.5	
Austr		-18.3		-29.3	
Europ		—70.9		68.6	
	of the world	-145.8		-127.1	:
Total Investmen		-1,035.8 1,415.3		-950.4 1,276.2	9.0 +10.9
Life profit		253.2	7.5	215.2	+17.7
Net profi		442-4		383.3	+154
Augrage :	dividend increa				+140

Source: Wood Mack

leeding to inadequate rates and rising underwriting losses. Eurricane Alicia caused considerable losses for some of the insurance groups operating in tha U.S. and the severe December weather resulted in even

heavier losses for all.
British insurance companies carefully at their operations. They have increased premium rates, even if this meant losing

The British result was dis-appointing for the insurance mpanies considering that the winter of 1982 was one of the everest in memory. The reduction in underwrit-

ing losses from £314.7m to £274m.6m only underlines the basic weakness in the British insurance markets

The better weather last year meant domestic household buildnegati tromesta showed sharp re- flons to start cutting premium ductions in underwriting los but the dry summer caused an outbreak of subsidence claims towards the end of the year. owards the end of the year. recovery in spite of big busb However, this improvement fires in Victoria and South was offset to a large extent by the continuing rise in theft elaims. Insurance companies paid out more than £200m on

theft claims from homes and quarter more than in 1982. Some countries showed improve-Insurance companies operations in Britain have been com- worsened.

petition emerged last year as underwriting losses climbed steadily. The situation was ex-

scendig ine situation was ex-acerbated by a rise in the frequency of claims.

Fire damage, excluding the insured £165m fire at the Royal Ordinance depot at Donnington in Shropshire, was little different from that of 1982. But com-mercial property accounts in Britain are suffering from competition and inadequate rates so the stability of fire losses was

However, there were signs that companies were not prepared to cut premium rates further to keep business. Canada showed a useful recovery in reducing losses. But the recovery stopped in the fourth quarter as insurance companies in that country took advantage of improved condirates again to increase market

Australia showed e Australia early in the year. ful that the recovery in Australia is more permanent than in Canada

BUSINESSMAN'S DIARY

UK TRADE FAIRS AND

April 16-18
Solids Handling Erhibition— British tree
SOLIDEX (Uxbridge (0895) 65912)

Harrogate May 15-17
Micrograph

International Air Cargo Exhibition and Conference (St. (01-729-0677):
Albans (0727) 68633)

May 21-25
International Fire

British Craft Trade Fair (0282 65912) Harrogate May 1-3

All Electronics ECIF Show and Conferences (Godalming (0799 26699)

Barbican (04868) 6653)

Riconshints Crest Hotel, WCL

Fibre Optics Exhibition and May 15-17
Conference (0799-26699)
Whithread Forter Tun Rooms
Cunard International Hotel, W6 Business to Business Exhibition

hition and Comerence (St. May 21.25
Albans (0727) 68633)

Manchester

May 20-ct 21.

May 20-ct 21.

May 20-ct 21.

May 21.25

International Fire Safety Conference and Exhibition (01.248
4477)

NEC, Birmingham (051-236 6090)

Liverpool Riba computer exhibition and conference (01-637 8991)

Southern Alds for the Disabled Bloomsbury Crest Hotel

Southern Alds for the Disabled Bloomsbury Crest Hotel Exhibition and Conference (Tun. May 22-25 hridge Wells (0892) 44027) Chelsea Flower Show (01-834 Brighton 4333) Royal Hospital, SW3

OVERSEAS TRADE FAIRS

Food and Hotel Asia (01-486 1951) Singapore Food and natural Singapore

April 30 May 4 May 20-27

Direct Marketing Symposium and Exhibition (01/69 48 20)

May 20-27

International Aerosp tion (01-651 2191)

Montreux

May 22-25

Current May 10-13
Milao International Trade Fair Asian Automotive and Accession (01-637 3153) (until April 23) sories Exhibition (Guildford Milan (0483) 38085) Singapore April 16-19

European Trade Fair for Technics and Organisation in Banking International Packaging Exhibition and Display of Confectionery Machinery INTER-PACK (01-493 3893) Dusseldorf

International Aerospace Exhibi-

May 5-9
Systems Components and Asian International Electronic
Materials for Industrialised Communications Exhibition and
Building Sector Exhibition (01Conference — COMMUNICASIA
486 1951) Milan (01-488 1951) Singapore

BUSINESS CONFERENCES

May 3 May 16 Royal Lancaster Hotel, W2 May 16 Institute of Directors: New Institution of Taxation: Finance legislative threats to directors Bill 1984 (01-225 8847) (01-388 1811) Cafe Royal, WI InterConfinental Hotel, WI May 34 May 16

(01:385 1811) Cafe Royal, WI InterConfinential Hotel, WI May 3-4
FT/The Banker: World gold Longman Seminars/International conference (01-621 1355) Media Law: the media and the Hong Keng law (01-242-2548) Barbican May 3 Longman Seminars: The elso ESC USM, listing or private tronic banking revolution placing? (Uppingham (0872) legal and security problems 822711) Piccaelly Retail WI (07242 2548) Earbican May 10 Royal Jastitute of Navigation: WP: Electronic mail in practice Global Svil satellife havigation (07.242 2807)

Hay 11
Longman Seminars: The Lieyd's FT Conference Skew World FT Act. (01-242 2548).

Barbiern motor conference (01-621 1555)
Geneva

one wishing to attend any of the above events is advised to home the organisers to ensure that there has been no change

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heat and corrosion resistant and - a familiar refrain - are more energy efficient.

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EDITED BY ALAN CANE

DINOL IN SWEDEN AIMS TO PREVENT CORROSION BY AUTOMATION

Rustproof care by robots

BY JOHN GRIFFITHS

Ses j

TECHNICIANS from a number operation, with unannounced Mr Wisen points to four paroff the world's motor manufacture spot checks on its own Tuff-Kote ticular factors which, he thinks, set deep in the countryside of against potential abuse.

of Dinol International, the anti-corrosion subsidiary of Axel Johnson, which, with an annual

tions, doors and all other areas into this category in the UK, for perceived to be vulnerable.

The system, developed by inol, but using robotics from Traffia, can handle an assembly line rate of up to 40 vehicles per bour, says technical director Mr John Paulsson. In line with the the motor industry, it is pro-grammable to handle a variety of models coming down the

development of the system is nitely.

The bulk of its turnover (SKr 250m—about £23m—last year) comes from the supply of anti-corrosson chemicals to the motor and other industries—if the steel in a car will revert is already involved in assembly to its natural state of ferrous line operations with manufac-turers such es Audi, MAN and Volvo and to its 2,000 fran-

turers currently are beating a Dinol franchisees, they can are concentrating manufac-path to the town of Hasslebolm, never be wholly effective turers attention increasingly on

It houses the production plant of Dinol International, the anticorrosion subsidiary of Axel shifty of a car to corrosion subsidiary of Axel shifty of a car to corrosion turnover of £3bn, is Sweden's of leaving the production line, after Volvo and Electrolux.

Within an unpretentions below.

Within an unpretentious brick building. Dinol has set up what the company hopes will become a standard ingredient of vehicle assembly lines:

It is a fully robotic system for rustproofing validles even the state of vehicles prior to their contents. It is a fully robotic system porters of vehicles prior to their for rustproofing vehicles, cover-retail sale. Honda, Suzuki, ing underbody, interior box sec-

Nevertheless, says Mr Wisen, the most effective anti-corrosion protection must come from applying it during the actual assembly process, by a robotic system which allows no room flexible manufacturing systems for operator error, and be now becoming standardised in backed by a manufacturer-

Even then, be dismisses any The purpose behind Dinol's prospect of such measures pro-

"At best anti-corrosion measures can only delay the onset of rusting. To talk of corrosion-proofing is nonsense. One way or another, by force of nature, the steel in a car will revert

urers such es Audi, MAN and volvo and to its 2,000 franchised aftermarket treatment buted partly to the robotics, centres spread around the world. Their wider use in full on-line robotic systems obviously stands to increase this turnover substantially. Dinol is forecasting SKr 750m within the next five years.

It would also distance the light of the based rustproofing chemical on to the complete, assembled would be injected into sections, and the depth

Dinol itself will concede that jection into box sections and while it runs a tight monitoring other areas.

corrosion retardation: the switch, now some years ago, to water-based paint systems for vehicles; the increasingly corrosive nature of the atmosphere—"acid rain" is a prob-lem beginning to deeply worry much of Europe and Scandi-navia—intensified use of road de-icing compounds and the

major recent changes in car

In the last case, vehicle strength has become concen-trated on the way in which the sheet steel is stamped and folded, which has allowed thin-ner steels to be used in pursuit of weight-saving. Implicit in this is that the integrity of the thinner structure is liable to be damaged much more quickly compared with earlier struc-

This has made the treatment of box section interiors even more crucial and manufacturers have adopted a number of processes such as pre-treatment of steels, estaphoretic dips and anti-corrosion material injection as preventive measures. For virtually all, however, the last process is operator dependent

This key part of Dinol's robotic system, therefore, involves a commuter-controlled injection module with a variable number of piston operated nowles (20 on the demonstration system) injecting pre-determined amounts of treat-

ple, a multi-model line.

In developing it Dinol also claims to have come up with the answer to a previously that despite cal baffing problem: while considerable amounts of material would be injected into sections, its distribution and the depth of coating—on subsequent inspection—would be much less than the amount injected Dinol concluded, during three years of experiments, that conventional solvent-based materials caused a "washing tendency" and were subject to beavy evanced. company yet further from the badly tarnished image which the vehicle rustproofing industry—at least in the after-market—has acquired, with considerable justification.

Throughout, the problem of the complete, assembled would be injected into sections, has developed a material which is sprayed on while hot. The considerable justification.

Throughout, the problem of temperature stightly above the conditional calculations and the depth is spray head are all headed to a than the amount injected. Dinol industry—at least in the areaindustry—at least in the areamarket—has acquired, with
considerable instification.

Throughout, the problem of
"aftermarket" rustproofing—
usually carried out by franusually carried out by francar has been purchased—has
the problem of
material's setting point, without
to its setting point, without
to be a set of the its setting point, without
to be a set of Other compounds of differing the new materials being used characteristics are used for inwax-based in suspension rather



Dinal cavity treatment by robot. The Trailfa 4000 robot hits the target with a precision of less than 0.5 mm

become a significant marketing plank for manufacturers and has led to an increasing number offering five or six year warranties. Mr Wisen says be believes
that some, at least of them may
be storing up trouble for themselves on the basis of present
technologies and application
technologies.

All of which sound like promotional hype were it not for monetary terms, however, this the depth of Dinol's experience in the industry. It has long been integral to the operations of Volvo, with whom it has cooperated for over 39 years, During this time Dinol has become (about £20n).

The ability of a car to with systems consultant, tool destand corrosion increasingly bas veloper and product supplier to the car maker, with tanker trucks operating on a shuttle basis betwee Dinol's and Volvo's

> The automotive industry forms just a part of the company's anti-corrosion activities. however. They include aero-space and since 1882, it has been involved in collaboration with Lufthansa aimed at reduc-

A U.S. Congressional study in 1978 concluded that across all sectors of industry, only about 15 per cent of corrosion is preventable—a figure with which Dinol does not disagree. In monetary terms, however, this represents a startling amount:

Materials

Plasma deposition

RAPID solidification plasma deposition (RSPD) is a tech-nique which allows high in-tegrity metal parts to be made by e spraying process in partial vacuum. It is under development et General Electric of the U.S. in Schenectady, New York. A further \$3.5m is being pumped into the project by the U.S. Government following a promising year-long \$2m first phase in which scientists and engineers from GE and Drexler

University are participating. Parts are formed with a spray gun that ejects a stream of molten metal at a suitably shaped former. The stream solidifies immediately and is built up layer by layer to sehieve the desired shape, size and thickness. The former is then etched or machined eway, leaving the metal part.

Dr R. W. Schmitt, GE senior vice-president for corporate R and D, thinks the technique R and D, thinks the technique will rival powder metallurgy and casting. He said: "By eliminating the need for many casting, forging and machining operations, the spray-forming technique offers the potential for dramatically increased productivity and lower costs." ductivity and lower costs."

The high energy gun produces a stream of ionised gases (plesma) at 11,000 deg C into which any alloy in powder form can be injected. The pertieles are instantly melted and are propelled from the spray nozzle at about 500 miles/

After a short flight time the liquid droplets hit the substrate and are quenched at nearly a million degrees per second. The eotire process takes place in a low pressure chamber to prevent oxidation of the metal n the atmospherie oxygen.

The technique produces dense, small-grained structures potentially beying much higher tensile strength and thermal fatigue resistance than can be achieved with conven-tional methods."

Such properties are important for highly stressed jet eogine components like turbine blades, which are exposed to hot gases. Stronger, less thermally-affected blades allow higher operating temperatures in the engine, so enhancing fuel economy and performance.

The research contract was placed by Wright Air Force Base, with the overall aim of fabricating a number of advance aircraft components. GE is on (518) 385 8515. Cash registers

Talking shop

talker, uses speech synthesis "chips" to generate verbalised prices for the customer including all the numerals, and the words "pounds" and "pence." The digitised versions of the sounds are kept in a semicondnetor store and are released according to instructions from a bar code reader.

Bar godes on purchased items are scanned by a laser scanner. The labels give the European Article Number code which specifies the type of product and tho price. A loudspeaker in the till then atters the price.

The time taken for the system to read the bar code and speak the price for the customer is much less than the assistant keying all the data on a conventional cash register. More on 01-251 4161.

Financial analysis

is used for the analysis of minicipal bond issues has been developed by B. A. Nicbolson & Company in New York. The American company said that Munibid runs on the IBM range of personal computers. This product is the fourth in the series which structure and analyse municipal finance in the U.S. More information on (212) 889 7535.

HUGIN CLAIMS to be first in Europe with a talking eash register—at a CWS Super-

The system, called Posi-

Software

A COMPUTER program which

PORTURE To stay ahead we think ahead

Market leaders in micro technology 01-741 5111

Peripherals

Epson printers

EPSON OF Jepan, dominant force in printers for the professional personal compnter (the IBM PC printer is in fact Epson's FX-80 in new livery) has launched two new printers which threaten to set new standards of price and performance in both the small business machine and computing market

Sectors.
The P-40, aimed principally at the bome and portable com-puter market, costs only £95 plus VAT. It measures only 4.6 cm by 21.6 cm by 12.8 cm and uses a thermal dot matrix mechanism; printing on thermal paper with friction

The P-80 is a thermal transfer printer with true 80 column capacity which can use normal or thermal paper. It costs £160 plus VAT and prints at 45 characters a

Both printers are aimed at

users with portable computers and run off batteries or mains electricity. Epson also launched a colour printer, the JK-80 at £560 plus VAT and a colour ploter, the HI-80 at £400 plus

The JX-80 operates in monochrome mode unless instructed to print in any

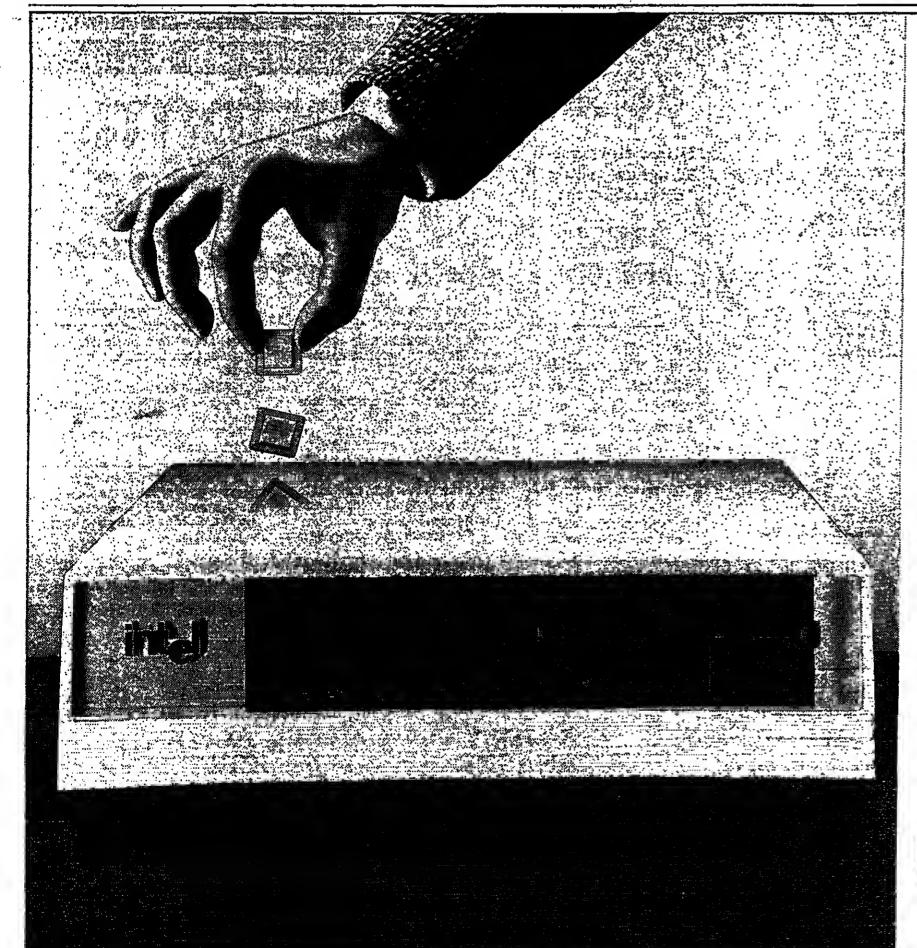
one of seven colours, pro-duced through the use of a four colour cartridge ribbon. All four printers will be available in the UK leter in the year. More on 01-902

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tion, take a look at our software expertise. Intel's Database Information System (iDIS) lets your personal computer talk to your mainframe ... and vour mainframe talk back. And our integrated Transaction Processing System (iTPS) can halve the time it takes to develop tailored application software.

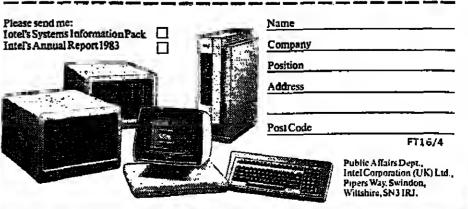
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PAN AMERICAN is reintroduc ing its once popular last chance fight from London to New York. The 19.00 hours PA 103

from Heathrow to JFK was

stopped in January after a wrangle with the UK Government. The flight is enthusiastically supported by passengers wanting to do a full day's work before leaving

London and who do not mind

the late night arrival in New

York Clipper and first class

passengers get the use of Pan Am's New York lounge at Heathrow and limousine service

THE CLUB system has spread

to the cross-channel ferries. So many business travellers are

many business fraveners are now taking their own cars on business trips involving channel crossings that Townsend Thoresen is experimenting with

chib lounges. The first lounges are on the longer haul routes. Portsmouth to Cherbourg and

The lounges have steward service and offer free fruit juices, tea and coffee at breakfast time. The lounges cost £1 per seat on day sailings, £3 a

BRITAIN'S two major magazines for the business travelling

community. Business Traveller and Executive Travel, are locked

in a new marketing war. Both have now appointed publicists

nave now appointed publicasts to drum up custom and the result could be even more of those "airlina of the year," "rental company of the year," "rental company of the year," surveys.

Executive Travel's latest excur-

sion is into tha field of Club

Class on airlines. It emerges antagonistic. If you hold the view that Club class is as good as the aeating space then the findings are revealing. The dis-tance between seats, the crucial

knee-room, tiny 32 ins on some short-haul Alitalia, Aer Lingus and Iberia flights to a healthy

42 on some Thai, MAS and, oddly enough, Iberia trips. Several airlines offer only 17-inch seat width, which means a

tiny hottom and elbow space but

SAS HAS added Hertz to its

thus allowing direct, access to

the car rental-company's world-

wide computer network and pro-viding simultaneous booking

facilities for both flight and car.

computer reservations system

UTA manages 26.7 ins.

seat on night crossings.

Le Havre.

into Manhattan after arrival.

THE MANAGEMENT PAGE

The 'networker' moves on a step

Brian Groom reports on the emergence of the neighbourhood office

used to being one of the world's year he is trying to introduce leading guinea-pigs when it more systematic methods of comes to finding new ways to marketing to cope with the work. After becoming Rank peaks and troughs.

Xerox's first "networker" 21 Phil Judkins. years ago, he is now experimenting with another aspect of the society of the future — the neighbourhood office.

Business colleagues, including other networkers, started in-formally last year to share the use of rooms in an old Georgian bouse in Stony Stratford, near Milton Keynes, from which Waker's expanding personnel consultancy operates. "Now I'm putting this on a more formal isis and RX will monitor it," he says.

Networking is the project run by Rank Xerox, the office equipment company, in which em-ployees leave the staff and turn themselves into independent limited companies. They sell their services to Rank Xerox and other customers.

Rank Xerox's 45 networkers, whose businesses range from computing to financial control and marketing, keep in touch and marketing, keep in touco with the parent company via microcomputers with a tele-communications link. The pro-ject is one of the most sophisti-cated developments in "tele-commuting" or "teleworking." using terminals to work at loca-tions (usually people's homes) remote from employers.

Rank Xerox claims a fair degree of success for its networking experiment so far. A key aim was to save on things like rent, rates, heat, power, maintenance and security, which make up 31 per cent of central offica costs. It has been able to save £im a year by vacating its Cleveland Street building in London.

networkers' husinesses have failed. Some are expanding and taking on their own staff, Walker, aged 39, now has business plan which envisages £150,000 net turnover in the coming year. He has three direct employees and, with his company acting as an employment agency, has five contract staff (secretaries and data punch operators) on second-ment to other organisations.

Walker is enjoying himself, though he admits to having experienced "moments of fleeting terror" caused by the problems of keeping work and cash flow-

Phil Judkins, manager headquarters personnel and re-sources at Rank Xerox believes many companies will want to adopt arrangements like net-working in the next two to five years, because of the falling cost of microcomputers, the high cost of central offices and demands from employees for greater personal motivation and

achievement "They should start now," he says. Rank Xerox knows of 12 other companies which bave recently started networking type projects. Networking has attracted huge interest in the press, and brought inquiries even from major Japanese com-

No networkers have failed. Some are expanding and taking on staff.'

One of the main potential problems of working from home is isolation—lack of contact with professional colleagues. Homeworking also requires self-discipline so as to avoid distractions, though seeing more of the family is a compensating

Rank Xerox has taken steps to minimise isolation. Networkers are treated as the company's "extended family." Close contact is maintained, their names are kept on internal circulation lists and the telephone directory, and they are invited to departmental meetings. They can join Xanadu, the mntual support association of former employees who bave left to start their own businesses (see

accompanying article).

Now the company is trying out the "neighbourhood office" - the idea that people who work a long way from their vanious employers or customers can share office space in their home district, linked to their individual company head-

quarters by computer terminal. This concept is aimed at pro-viding mustual emotional sup-bution course. Walker picked how small businesses inter-port — sharing a cup of coffee up the business, and brought in relate.

ROGER WALKER is getting ing in a small business. This and advice when contracts are used to being one of the world's year he is trying to introduce coming in slowly invariably

The participants can also share the cost of secretarial services, and expensive Jeems of information technology.

The idea is often discussed by academics, but there are few good practical examples. It is difficult to bring workers to-gether organisationally unless they have some common link. A report by Rank Xerox's archi-tectural consultants, Duffy Eley Giffone Worthington, on developments in Europe, shows the rarity of the advanced-technology neighbourhood office.

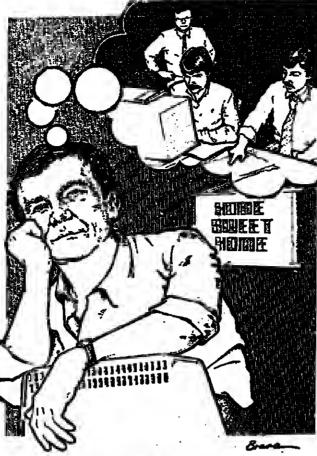
In France, the state tele-communications office, DGT, bas centres but most have heen very small-scale. A grander "tele-local" at Marne-la-Vallée, in-tended to bouse at least 100 workers from 15 organisations, has never got fully under way, partly because companies have heen lukewarm.

The Swedes are running an experimental community work centre at Nykvarn, 40 miles outside Stockholm, to monitor the impact of working away from head office and the use of data transmission methods, and to identify workplace needs.

Some users feel that the need to keep conditions constant for purposes of academic research has hindered the government-supported centre's development. When research funding stops in the middle of this year, a resident business manager may be hrought in to run it commer cially. But its future remains uncertain.

Rank Xerox makes no grand claims for Roger Walker's ex-periment. Far from being a large, formal project involving many businesses, it is one man's premises being used informally by associates who drop in, Rank Xerox hopes that because in arose from a need, and because of the relationship between the users, it will succeed and grow naturally where more ambitious projects would fail.

Mostly the other users are people doing wor kfor Walker, or putting work his way. Tesco, for instance, wanted someone to



One of the problems of working from home can be isolation?

colleague to do the work for

What are the possible draw-hacks of this kind of sharing? "You can sometimes let business interfere wih relationships. It's extremely important to define contracts in detail at the outset to protect that relationship,"

The Stony Stratford office is equipped with two microcom-puters—an RX 820 on loan and an Apple, with a printer which is also used as an electric type-writer—an acoustic data coupler, and an RX 1020 copier. At home he has an RX 822 on loan. Walker does a third of his work at home, a third at the office, and a third at clients' offices. Increased flexibility between bome and office is one of likeliest features working future

Rank Xerox is considering a second experiment—this time leaving salary, company car, smonitoring a new networker pension and secretary behind who would move in with a and setting np your own busigroup of established personnel consultants in a shared office. The company's overall aim is ferential rates for office equip-to examine the equipment ment. RX turns down half the

Their progress will be compared with similar developments like Xanadu's business support centres at Coinbrook near Slough, Tottenham Court Road in London, and a third one to be opened in Gloucester, where there are a number of ex-Rank employees. These provide temporary office hire, meeting rooms, word pro-

Rank Xerox hopes that the neighbourhood office concept, But neither development will sweep through society's work patterns overnight. The bulk of people will work in traditional offices or factories for tha foreseeable future. Networking is suited to professional work dealing with information, rather than process or manufacturing

cessing and clerical assistance.

The climate remains cold for ex-gratia payment and prement. RX turns down half the peopla who apply to become networkers, and tries to select only the most resilient types.

Xanadu

Helping people avoid pitfalls

XANADU IS the mutual support organisation for former Rank Xerox employees including networkers who left their own businesses. It comprises 250 companies with £15m-£20m joint hirn-over and a total of 750 wor-

Founded in April 1982, its aims include exchange of basi-ness opportunities, informa-tion and services, group pur-chasing of things like private health care and life assurance, and providing a continued link with Rank Xerox.

It started when Rank Xerox. looking to reduce staff numbers, was thinking of enlightened afternatives to straightforward redundancy. One solution was to offer sub-stantial packages of assistance to volunteers who wanted to start a business.

Richard Coon, Rank Xerox's former financial controller for Restern Europe, the company's second networker, left to become a business start-up consultant and specifically to establish n support programme for these leaving Rank Xerox.

This involved personal counselling and a one-week course, which included advice on how to put a business plan together. "That's where most people go wroug, says Coon. Everyone had to present his members of the group.

"It became clear that starting your own business never stepped. You go from one crisis to another. You need a continuing support associa-tion," Coon adds.

Xanadu was therefore born at a meeting at the White House, near Rank Xerox's Enston headquarters in London. It had 60 members at first, and planned to meet

regularly. One of its first decisions was that it would not market the services of members, on the grounds that it was hard to market such a wide range of businesses as computer software and marketing consultants to bicycle hire in Scot-land, sheep farming in Wales and a flower shop in Soho.

That decision has now been reversed, because members came to feel that business opportunities could be ex-Two

Xanadu Ltd and Xanadu Con-sultants Ltd have been set up to market members Services through mailing sh advertising, and at exhibi-

Xanadu has also started selling associate membership to companies outside former Rank Xerox fold. They will get benefits such as courses and discounts, but will not be able to vote on

In spite of the national 32 per cent failure rate for small businesses, Kanadu has so far had no collapses—though a couple of members have returned to employment after deciding that going-it-alone did not suit them. Com accepts, however, that failures are bound to happen in the

Office hotel

some onspices are grow-ing fast. Coon has set up a software company with two colleagues, called Percon. It is launching a complete per-sonnel management system for microcomputers, which it hopes will grow tenfold over three years to a turnover of more than £3m, and will then be launched on the Unlisted Securities Market.

Xanadu rims two business support centres offering office space, facilities and clerical assistance for hire, and is setting up a third. It is thinking of setting up an "office hotel." Xanadu House, available for short- or long-term hire on the south-western fringes of London.

The hasic Xanadu subscription is £10 a year. Rank Xerox has helped out by paying bills up to a total of £16,000 in each of the first two years, and is assisting with premises and equipment for the support centres.

A number of other major companies have made approaches to Xanada, seek ing to know more so they can provide similar facilities for their own employees who may leave to set up their own Networking was first des-

and 20, 1982.

cribed on this page on July 19 Arthur Sandles

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THE ARTS

Common Ground/Sadler's Wells Clement Crisp

In a praise-worthy burst of and Michael Batchelor in a duet, creativity, the Royal Ballet Karen Donovan, David Yow organisation put on three new and Michael O'Hare as a trio works by house choreographers skimming and skittering over the stage—and the only drawback to the work is its dress. Sadler's Wells troupe further evidence of the talent that must decorated the stage intriguingly with what look like fragments.

I saw Miss Jackson's ballet on Friday and enjoyed it even more on o second viewing on Saturday. The idiom is plottess, the cast numbers only eight dancers, but Miss Jackson responds to her score—Lennox Parkalay's Sermade for Strings Berkeley's Serenade for Strings with alert, musically imagina-

Her choreography does not what some observers to expect, that dutiful mickey-mousing of step for glum beach-wear on view at note (what disarray must Agon cause to their perceptions!), hut there is a lively awareness of relationships between orchestral form and souprity in a movement language that already. Agon were never more ment language that already

Comfort. Only he or a Restora-tion playwright of more than

usually leering persuasion could

have made up a sex counsellor

what cousummate ease

did Desmond recover bis-

ted-well, violence.

aplomb at Miss Durant's dance entitled "The essence of womanhood," with its unexpec-

We would be the last to con-

demn the outburst of ortistics temperament that led to Wal-

lace's mutiny during Beauty and the Beast; somehow, as

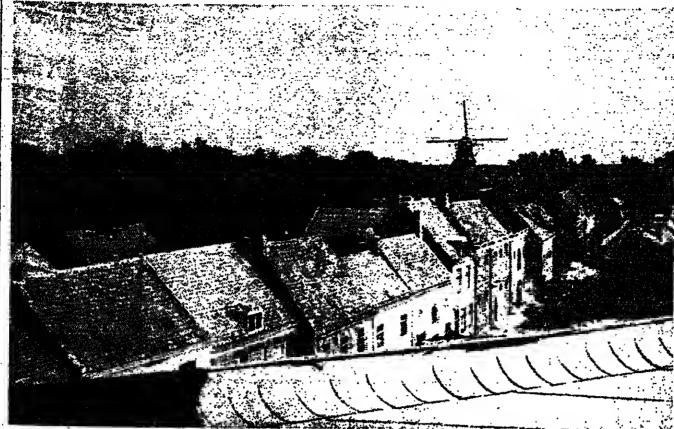
several tiny figures in the Press

seats were heard to exclaim. this was the very stuff of

theotre. His performance as

with what look like fragments of scorched paper. The mistake

Rarely have attractive dancers come on stage looking so grubby, and the pallid colours of the stage picture detract from the unexpected emotional shading of the dance. With tha ment language that already alr The performances of the frocks and trousers which cast are stylish—Samira Saidi distort line and deform dancers



Windmills, pantiles and neat rows of small houses are the elements of Buren, near Utrecht, one of many well-preserved Dutch towns

Colin Amery

A touchy problem in Holland

Martin Hoyle

The originally scheduled title had to be changed, if Desmond Olivier Dingle, Artistic Director of the National Theatre of Brent, is to be believed, in deference to those who, like Dr Casanova, especially making lovely horse-noises so that one could olmost see his foaming steed foaming, more than re-Comfort, believe they bave cornered the market in the joy of sex. Frankly, I think Desmond Oliviar Dingle is Alex

The Complete Guide to Sex

Need we add that the evening is not without poetry? As a Chinese couple, musing over their age-old modies, the National Theatre of Brent touch on the age-old mystery of "the way of a man with a maid," as Kenneth Tynan once said when Kenneth Tynan once said, when Wallace, in the persons of the Desmond warns us initially that his probe into human sexuality, "sex, as it is known," taking us through, or into, or possibly just under, the "seamy underbelly of contemporary cul-

underbelly of contemporary cul- mer?" ture" is not goin to be fan, certainly not enjoyable (his cavalierly dismissive way with With Maestro Stuart Barham at the piano and the dancing lady, Andrea Durant, it is all the letter g extends even to Nottinham). Conceived quite a Gesamthunstwerk, as the German composer Wagner used to say. Perhaps because of "broadly along Brechtian lines." with hommage to "Stania real "pros arch", as we say, the NTB calls on us to particislavsky, Artaud, Brook and Lloyd-Webber," the evening at pate less than usual, and the audience was a wee bit in-hibited when asked to put hands up if unusually attractive or unusually perverted. Though I remember someone in the Press the Lyric Hammersmith incorporates fairy tale, history and symbolic dance. While we were disappointed

at the sordid road house sketch having to be played against a seats—but no; it must have Japanese garden set (though been the excitement of the the bridge was attractive!), moment. this was more than compen-sated for by the analysis of mythic elements in Snow White and the Seven Dwarfs. With versatile Wallace use the technical wizardry of a trap-door and folse feet to create the illusion of a tiny person. How we sympathised with Snow-White's complaint of "I've had dwarfs up to . . here." The bistorical reconstruction of the amour fou of Edward VIII and Mrs Simpson had the vividness of touch of The Jewel in the Crown or The Young Visitors. And with what aplomb _er_

Patrick Barlow

Holland is a country that projects a remarkably consistent image. It is flat and typical of any delta area. It has a unity of art and architecture and townscape. It is tidy, though descale populated and though densely populated, and always appears to be remark-ably regulated, orderly and neat.

I was grateful recently to be shown bow Holland is looking after its architectural heritage in several of the less well known towns and areas away from the tourist traps of Amsterdam, Delft and Haarlem.

What has always fascinated me about Holland is the close-ness of the relationship between

mes of the relationship between
painting and architecture and
the particular pleasure the
Dutch seem to taka in the
organisation of domestic, smallscale perfection. The "Dutch
vision" has developed from a
land where every inch of space
matters. It is bound to be intricate and depend for spatial
lliusions upon the reflections in
long canals and the huge
expanses of infinite_sky.

Like any other war-damaged
and inighty-marindustrialised
Western European country Holland's preservation problems
are complex and demand sensitive and detailed legislation and
movement but the company
(now part of Nabisco Brands
(now part of Nabisco Brands tive and detailed legislation and movement buildings erected, protected and are frequently management. There are well over 40,000 protected monuments and historic monuments made of the stuff that makes towns of Buren, Heusden, Goes, in the Netherlands. Most date from before 1850 and a start lem here with early works of Leiden Hoory and Zwolle I. WOLKS OF

period of temporary protection during which owners and other affected parties can make their objections known. This is pleasingly democratic, but would lead here to endless wrangles and difficulties.

I visited one particular problem building which is on the provisional list and is an example of general European significance. It was in 1930 that the architects J. A. Brinkman and L. C. van der Vlugt built, the magnificently light and streamlined tea and light and streamlined tea and advanced and serious. The trial archaeologists and that there is no of these towns would offer the opportunity of seeing complete alices of townscape of a richnesa and unity of scale not likely to be seen in many places in England. However it is at some provisional list and is an extended by the industrial archaeologists. It is a touchy problem.

In the other fields of consonwhat artificial, too close to the tourist trade to be real townscapes the Netherlands is advanced and serious. The most intuing in the concrete worlds

Brinkman and L. C. van der Vlugt built, the magnificently light and streamlined tea and coffee factory for the Van Nelle family fibrm. It is a model foctory still, glorlously light, elegant, functional and afficient. It has just been declared a monument but the company (now part of Nabisco Brands Inc.) is objecting strongly to the pew status.

Sevation historic houses and townscapes the Netherlands is with everyday life in fact continuing in the concrete worlds that are never far away. The cloud of pollution hanging over go into the coordinating of the works of the various independent amenty groups and private agencies. There is a national suffers from its small size—the post and the present are literally protection of monuments and historic buildings which tries, with everyday life in fact continuing in the concrete worlds that are never far away. The cloud of pollution hanging over go into the coordinating of the works of the various independent amenty groups and private agencies. There is a national suffers from its small size—the post and the present are literally protection of monuments and historic buildings which tries, with some success to unify the some successible for

has been made on the more that industrial revolution—a faw delicate business of listing later buildings erected up to 1930.

In one major respect the listing process differs in Holland because there is a two-year later of the more with early works of Leiden, Hoorn and Zwolle. I Festival in the United States. The company will also hack do finite buildings that have been moved into "new" his away and replaced by new kinds toric villages—Zaanse Schans at Beemster and Enkhuizen on the It seems to me that industry lisselmeer. A visit to any one 10 to 12).

for the finale. The Brodsky

are nearly there, but not quite:

those presto scorrevole triplets should run like liquid fire.

o quartet which they have studied longer, or one with

was far surer and more confi-

Brodsky Quartet/Wigmore Hall

Dominic Gill

restored and occessible for enjoyment

JVC to sponsor jazz festivals

JVC (Victor Company of JVC (Victor Company of Japan) is to sponsor four major international jazz festivals in Europe and America for an Initial three-year period, The festivals will include the Capital Jazz Parade in London, from July 16 to 21, and the Newport, Rhoda Island, Jazz Festival in the United States. estival in the United

Beethoven from the Brodsky

or the other.
As Pierre, the honourable

I first heard the Brodsky of Bartok's fifth quartest, the swings. It's a rare ensemble dent. There were some rough-String Quartet—who came to-gether at the Royal Northern College of Music as long ago as been similarly indged. So much clarity of articulation necessary by Jacqueline Thomas which must he cured); but in its broad lines it was a powerfully con-vincing account, worked with Perhaps Beethoven's op.132 is much lively insight and care, quartet which they have The finale still needs tightenmeaning, and he apeaks Otway'a verse to perfection, in a manner that retains all the poetry while allowing for the everyday ing: but the two shorter inner which they have the more movements were cleanly, wittily instinctive sympathy. It is a pointed, and the adagio far more complex work: but Dankgesang had real radiance. their grasp of style and gesture I look forward to hearing more

Peg/Phoenix

Martin Hoyle

new musical is the work of David Heneker whose achievements include Irma la Douce and Holf o Sirpence, so the material is not too unworthy, merely here rather dull. Still, Sian Phillips twitches her skirts to a throbbing Sprechgesang about the shoals of spinslers in British India's marriage market. Is this the first musical to allude to the newly fashionable Raj?

The sets augur well: a round Japanese lantern of a sun or moon against a slatted sky, and cut-out banisters, baluatrades and window frames flown in and and window frames flown in and out have the spare attenuated elegance of an Erte fashion plaie. But almost at once the below stairs staff is lined up, arms pumping like principal boys, tot he chuggingly unmemmorable rum-ti-tum that has innocuously served most British musicals since the 1940s.

If there is one image that surely) and some non-rhymes sums up the British musicol it like "If you chose me How is the spectacle of a well-loved should my clolles be?" Some figure from serious theatre kicking up his/her heels in undignified and more often than not
unworthy high-jinks.

Solution by Coulars be:

of his songs are all intro to the
melody that never comes, as in
the lament of the 30ish daughter of the house, poised des-Based on the old romantic comedy Peg O'My Heort, this new musical is the work of David Heneker whose achieve-

this. She needs a break.

Possibly the most hummable number goes to the house-keeper as she advises a girl on how to win a man, in a song that may have militant feminists picketing the theatre. This is hard luck on Miss Phillips whose star entrance, arms outstretched, triggers off nothing more than a reprise; and, above all, on Ann Morrison a Peg. Miss Morrison is American,

and it shows. Sad to say, the cliches apply. Her attack, ounch and natural mastery of the musical as a form make the overage Brit look like an end-of-the-pier turn. Her material is simply. But worthy of her simply not worthy of her.
Miss Phillips could point her
admittedly not very funny lines
rather more; Edward Duke is morable rum-ti-tum that has innocuously served most British musicals since the 1940s.

The story of a robustly unrefined and warm-hearted Irish-American heiress taken shudderingly to the bosom of a patrician English family down on its luck is paper-thin. Mr Heneker has incorporated the old song "Peg O'My Heart" as theme tune (a sign of defeat,

Venice Preserv'd/Lyttelton

"Lead him in virtue and the paths of bononr," Belvidera prays for her little son; but bonour makes a poor showing in Otway's blood-drenched tragedy. Jaffier, Belvidera's husband, is recruited by his friend Pierre into a plot against the Venetian Senate because ber father, Senate because ber father, Senator Priuli, has turned them into the street. Against his oath, he tells Belvidera of the plot, and she persuades him to betray the plotters to the Senate. They swear, as a reward, to spare the lives of his friends, hut kill them at once. As the last lights dim, Jaffier has renounced the Senate and returned to his earlier loyalty; to save Pierre from breaking on tha wheel, he stabs blm, and on the wheel, he states bim, and then himself. Belvidera, now out of ber mind, dies on the two bodies. It may sound rather outrageous, but it is first-class drama, and the National's production under Peter Gill is as beautiful as it is production.

is exciting.

Jaffier is first seen sprawling on the ground, thrown out of Priuli's bouse by his immaculately uniformed servants. In his last scene, he crawls on his hands and knees to beg Pierre's pardon. But meanwhile, Michael Pennington has performed the neat trick of preserving a trace of Jaffier's dignity while following him through his constant humiliations, a clever per-

plotter, turned against the rulers by his feelings for the under-privileged, Ian McKellen gives what is in my experience the best performance he has yet achieved, and that is about as high praise as I can find. Whatever his politics, he never loses the air of a mon of dignity and dedication. His first words to his mistress Aquilina (Stephanie Beacham)—"There's fool about you! "-are so rich with decent scorn that it never occurs to us
to wonder why he should be
shoring a profitigate mistress
with o silly senator. He can
fill o single word with vibrant
fill o single word with vibrant
on Theatre Projects.
Anthony Blackstock worked scorn that it never occurs to ns

always a recognisable daughter of the senatorial class, a right-thinking woman who, even in the course of the dispute with her father, remains firmly on his side. There were times when I would have welcomed a little more power, but at big moments such as her speech about the prospects of massacre, and her last scenes, where her brain gently gives way, are fine. She doesn't have as much chance of vartety as Aquilina, who has a splendidity comic time gratifying her senator (Hugh Paddick) with his demands to have her spit in his face or treat him like a dog

face or treat bim like a dog.
Venice, in Alison Chitty's
sets, is a dark and lowering city, based on a fine arched gateway topped by the St Mark llon, and varied by the dropping of columns from the flies—all pretty un-Venetlan, to my way of thinking, but handsome. Virtually all the Venetian citizens wear dark blue uniforms trimmed with more or less gold occording to their station; the English Ambassador Ellot and the evil Frenchman Renault (pronounced in scrapulous French, complete with the initial "r" in the throat) wear other, but equally inconspicuous colours. Belvidera is always perfectly dressed, even after

three years of poverty.

This is a production to be formance of a part that might the splendours of the playing so easily swing too far one way and the direction, the little incidental beauties such as the Monteverdiesaue music by Dominic Muldowney, the expressive lighting with no light from in front of the stage, but also for the intrinsic charms of the play itself.

Arts Council

finance director

The Arts Council has appointed 34-year-old Anthony Blackstock as its new finance

for the Arts Council from 1976 to 1981, aince when he has been head of radio finance at the Independent Broadcasting Belvidera is a part designed Authority, where he has been to show all the female merita, responsible for the finances of and Jane Lapotaire keeps her Independent Local Radio.

Arts Guide

Mustc/Monday. Opera and Ballet/Tuesday. Theatre/Wednes-day. Exhibitions/Thursday. A selective guide to all the Arts ap-

pears each Friday.

April 13-19

Music

: 15.3

-:..'

LONDON Halle Orchestra conducted by Zdenek Macai with Robert Cohen, cello. El-gar and Bruckner. Barbican Hall

(Mon). (638 8891) cadon Symphony Orchestra conduct-ed by Claudio Abbado with Maurizio Pollini, piano. Beethoven. Royal Festival Hall (Tue) (9283191)

London Sinfonietta conducted by Lo-thar Zagrosek with Teresa Cahill, soprano and John Constable, piano. Stockhausen, Dallapiccola, Mul-downey and Berio. Queen Elizabeth Hall (Tua) (6:283191) Hall (Tue) (9283191)

Royal Philharmonic Society and BBC
Symphony Orchestra conducted by
Sir John Pritchard with Brigitte
Fassbänder, mezzosoprano. Delius,
Mahler and Strauss. Royal Festival

Hall (Wed)
Royal Philharmonic Orchestra conducted by Yehudi Menuhin with Edward Wulison, violin. Glinka, Delius, Tchaikovsky and Brahms, Barbi-

can Hall (Wed)
Philharmonia Orchestra conducted by Simon Rattle with Florence Quivar, mezzosoprano and John Mitchin-son, tenor. Mahler, Webern, Berg and Mahler. Royal Festival Hall

Jack Gibbons, piano: Bach, Chopin and Ravel Queen Elizabeth Hall (Thur). (928 3191) Royal Philharmonic Orchestra con-ducted by Richard Harvey with John Order plana Rapher Sibelius John Ordoo, piano. Berhoz, Sibelius, Tchaikovsky and Mussorgsky/Rav-el. Barbican Hall (Thur)

onnie Scott's, Frith Street: Machito and his orchestra. (4890747)

Grace Bunsbry recital, Geoffrey Par-sons, piano (Mon). Theatre de l'Athènee (7426727) Orchestre National de France and Ra-dio France Choir conducted by Em-manuel Krivine with Christiane Eda-Pierre and Elisabeth Söderström: Soirèe Francis Pou-lenc-Jean Cocteau (Mon). Salle Piey-el (561 0620)

el (561 0620) Ensemble Orchestral de Paris, Jean-Pierre Wallez as conductor and soloist, Christian Crenna, violin, Man-fred Stilz, flute: Vivaldi (Mon

2.30pm. Tue and Thur 10am and 2.30pm). Theatre des Champs Elysees (7234777) Nouvel Orchestre Philharmonique

conducted by Garard Akoka, Olivier Gardon, piano: Prokofiev, Bartok (Tue); Radio France, Grand Auditorium (524 1516) Nouvel Orchestre Philharmoni

Ensemble Rameau, Matrise de Ra-dio France conducted by Henri Farge: Pergolesi, Coretta (Wed) Farge: Pergolesi, Coretta (Wed) Saint-Louis-En-Fisie (524 1516) Orchestre de Paris Conducted by Gary Bertini: Mahler's 6th Symphon (Wed, Thur) Saile Pleyel (563 0796)

NEW YORK

New York Philharmonic (Avery Fisher Hall): Zubin Mehta conducting, Lorne Munroe, cello. Carter, Bloch, Tchaikovsky (Tue); Zubin Mehta conducting Leona Mitchell, sopra-no, Thomas Allen, baritone, West-

1972, when its members were still in their early teens—at the

Evian string quartet competi-tion in 1980. Their playing was

uneven and not always of the greatest finesse, but the jury were impressed by the young ensemble's unanimity, intelligence and drive, and awarded them a special medal for outstanding promise

The Brodsky's performance

standing promise.

minster Choir directed by Josephy Flummerfelt. All-Brahms programme (Thur). Lincoln Center (8742424)
Carnegie Recital Hall: American Brass Quintet: Scheidt, Stobzer Tsontakis, Maurer, Snow, Ferrabosco (Wed). (2477459).
Musica Sacra (Avery Fisher Hall): Richard Westenburg conducting, Charles Bressler, tenor, Malcolm Smith, bass, Gwendolyn Bradley soprano, Janice Tsylor mezzosoprano, Jon Humphrey, tenor, Justino Diaz, hass. All-Bach programme (Wed). Lincoln Center (6742424)
Merkin Hall (Goodman House): Elaine Merkin Hall (Goodman House): Elaine Greenfield, piano: Pamela Guidetti,

flute recital: Debussy, Poulenc, Gau-bert, Martin (Thur). 67th W of Broadway (3628719) Y Chamber Orchestra (Carnegie Hall): Gerard Schwarz conducting Alfred Brendel, piano. All-Beethoven programme (Thur) (2477459)

CHICAGO

Inicago Symphony and Chorus (Or-chestra Had): Sir Georg Solti conducting. All-Schönberg programme (Thur) (4858122)

WASHINGTON

lational Symphony (Concert Haif): Riccardo Chalily conducting, Vladi-mir Ashkenazy, plano. lves, Brahms (Tue, Wed mat Thur). Kennedy

omballe: Tonhalle Orchestra conduct-ed by Aldo Ceccato. R. Strauss, Stravinsky and De Falla. (Tue to Fri). (2011580)

VIENNA

Saturday night, might have been similarly indged. So much of it was right: bright-toned, impeccably tuned, enthusiastic, driven with a powerful momentum. Only the musical gestures themselves lacked the precision of shaping and the poise demanded by that most exacting

of all Bartok's quartets—the haunted musing and wild-flung

melody of the first movement, the adagio's anxious quietude.

Hanne-Berit Hahnemann, violin. Beethoven, Grieg, Richard Strauss. Bösendorfer Saal. Mon) Viviane Gomeri, piano. Mozart, Beet-hoven, Chopin, Schumann. Bösen-dorfer Saal. (Thur)...

ITALY

Venice: Teatro La Fenice: From April 13 to 22, a series of concerts of different types of music all written for Easter, including Gregorian Chant.

Rome: Teatro Olimpico (Piazza Gen-tile da Fabriano): Messiah sung by the Choir of New College, Oxford. e: Auditorio di Via Della Conciliazione: Honegger's Jeanne d'Arc au Bucher – o dramatic oratorio. Mon and Tue. (654 1044)

leme: Oratorio del gonfalone: Vicolo Della Scimmia 1/D: Vivaldi and Bach – Arrigo Pedrolla Orchestra of Verona conducted by Giovanni Gug-

Bologna: Teatro Comunale: Mozart, Schubert, Brahms, and Strauss with the soprano Edith Mathis and pian-ist Edelmiro Arnaltes. Mon. (222999)

WORLD VALUE OF THE POUND

every Tuesday in the Financial Times

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and worldwide contact with clients.

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Council

For further information you are invited to contact Peter Mackintosh, Development Department, Highland Regional Council, FREEPOST, Regional Buildings, Clemanquiant Road, Inverness IV3 SER for telephone Highland Regional Council

Development Department

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FINANCIALTIMES

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Monday April 16 1984

The German spring'

MORE THAN 15,000 people last week were a reminder that from East Germany have been ultimate authority rests with allowed to leave for the West since the beginning of this year.

During the whole of 1983 only 11,000 got out The authorities to be interestions. 11,000 got out. The authorities it should not be intransigent in Bonn believe that another with Bonn, and with some other 15,000-20,000 will be allowed to western European states, if only 15.000-20,000 will be allowed to take advantage of relaxed East-West German relations which have become known as the

On humanitarian grounds ence—let along German resurginis letting-up on the part of East Berlin is very much to be welcomed. Patient diplomacy on the part of the West German leadership over many years has leadership over many years has been rewarded. Herr Erich Honecker, the bead of the East German regime, has summoned the courage to take a calculated

It is not to detract from these achievements if one adds that the current of migration is only a fraction of what one would expect it to be under half-way normal circumstances. East Germany may have opened a safety valve, but by any stan-dards acceptable in the West it

The political motives and reasoning behind the East German concessions must remain a cause for conjecture. It has been suggested that amigration is a welcome means to reduce unemployment, open or hidden. The known facts do not bear this out. The migrants come from all sections of East German society.

Soft line

What the evidence does show is that people dissatisfied with the regime provide the bulk of the migrants, if only because they have pursued their wisb to emigrate with special per-sistence. The conclusion, there-fore, looks obvious: Herr Honecker is trying to rid him-self of disaffected elements. It is an argument based not merely on his own political conveni-ence. It should also be sale-able to the Russians, whose ultimate authority be neither may nor wishes to cross. He can say to Moscow that a sensitive policy in East Germany counteracts any danger of the Polish experience being repeated

Beyond that, by keeping on speaking terms with Bonn, Herr Honecker secures material advantages for bis republic which indirectly benefit also the rest of East Europe. The DM 1bn (£266.6m) credit extended to East Germany last year is the most obvious case in

Honecker's soft line: otherwise civilised relationship without he would bave been stopped a long time ago. But the Kremlin has put down a marker: the pin-prick disturbances to western should be continuously prick disturbances to western sbould civil air links with West Berlin enlarged.

to keep alive the chance that transatiantic cracks will appear in the Nato alliance. Its well-known fear of German resurg-

This is a matter of interest to Germany's western neighbours as well. French concern has been obvious, not so much about the higher migration rate from East to West Germany as about the peace movement in West Germany and about the sympathies which it commands in the Social Democratic opposition. These are worries that go a long way to explain President Mitterrand's interest in closer Franco-German and western European defence co-operation.

Recent governments in Bonn bave handled these delicate matters with responsibility. Those in authority bave resisted any temptation, if tempted they were, to play with fire. What-ever botheads on the Christian Democrat side may have said in opposition, the Government of Dr Helmut Kohi has not deviated from its predecessor's acceptance that the East Ger-man state is a fact of life in Europe.

When one of Dr Kohi's closest advisers says that Bonn does not intend to "depopulate" tast Germany be is not merely stating the obvious; be is put-ting out a signal to reassure East Berlin. Only if the regime there feels secure can it follow a half-way flexible policy. But, bowever secure it feels, it will have to go a long way before accepting the argument made by some East German church-men, and commanding some sympathy among West Germans, that if only East Germans were allowed to travel freely the vast majority would not even wish

to leave for good. On a larger historic canvas, recent events are a remindar that Germany remains at the centre of Europe, and that the German question is still one of the central issues in Europe. Anyone who thought the issue would go away once Bonn and East Berlin had agreed on the framework of their relations by oint. the treaty of 1971 is sure to
One must assume that Moscow be disappointed. That treaty bas resigned itself to Herr created the potential for a more

farmer's banner at the Whitehall protest rally against the recent Common Market farm price agreement. To judge by the clatter in the farmer since the deal

farming press since the deal was struck. British farming as . we know it is about to dis-

we know it is about to disappear.

Around the ranks of the farmers critics have built a barbed wire fence of bostility. Everybody seems to think farmers are too fat, tha beneficiaries of a bloated protectionist system which bas gone on enriching them through the worst recession since the 1930s. Even when Mr Michael Jopling, the Agriculture Minister, announced details of the price agreement in the Commons, the

agreement in the Co: mons, the response lacked passion.

As Sir Michael Franklin, Permanent Secretary to the Ministry of Agriculture, put it in gentle Whitehall-speak at the Ministry's annual November outlook conference: "The tide

of public opinion is running against the industry. That is

something which democrati-cally-elected governments must

The case against the farmer bas become all too familiar.
According to official figures, farmers last year scooped £1.4bn in grants and subsidies

from government and Brussels, although many commentators

believe this figure should be at least doubled to reflect the true

cost of bridging the gap between Common Agricultural Policy prices and so-called world market prices.

But, even on the Ministry's figures, the farmers are in a

hole. Their entira net income last year was only £1.5bn—just

£100m more than the official estimate of the aid bill.

As Richard Body, a rural Tory MP, put it in his highly influential 1982 polemic, Agri-

culture; the Triumpb and the Shama, farming bas become "a

lame and diseased duck requiring ever larger injections of

public money to sustain it in a state of eupboria."

Mr Body's thesis is that farm prices should be allowed to fall rapidly to prevailing world prices, even though that would have a process to be a sustained by the state of th

force farmers on poorer land to

mostly damp and hilly farm-

The extent of the gap between CAP prices and world prices is a mattar of soma con-

troversy as many international prices are set in narrow markets which are subject to beavy influence by political decisions in Washington, World

prices are also pushed lower by the fact that the EEC dumps its

own CAP-induced surpluses.

But some notion of the polemicists' orders of magnitude can be gleaned from a

recent parliamentary answer,

when the Ministry was asked to state the annual cost of Britain's

main farming foodstuffs at CAP prices and at world rates. The

difference came to more than

The are several reasons why

it is now that farmers are in

such ill odour, rather than at

some previous point in the sys-

tematic subsidisation which fol-

lowed the 1947 Agriculture Act. Intensive farming, or at least

land. The

abandon cereals production. Lower cereals production.

Lower cereals prices would boost livestock and dairy farmers, who would thus reinherit the bulk of Britain's

take into account."

Brussels: the first turn of the screw

Ian Hargreaves on the impact of the EEC's policy change



Agriculture Minister Michael Jopling: implementing the cuts

institutional buying which did

ravage the landscape is another. livers almost 5,000 litres of milk to 10,000 of the country's 57,000 But most of the reasons are to do with the CAP and the fact that the system has protected farm prices against infla-tion throughout the recession, despite extremely depressed world commodity prices.

Since the Thatcher Govern-ment bas also shielded farmers from the ill-effects of petrosterling, by refusing to revalue the green pound, agriculture has enjoyed a doubla bonus of a type to make your average CBI member wince. The green pound is the artificial currency in which British farmers are paid for their exports.

The cost of the CAP and its associated homegrown subsidies
—farmers do not pay rates, for
example—rises as CAP prices and world prices diverge. This year, the Government has fore-cast tha total subsidy bill at £1.7bn, up from only £677m in 1979-80. Mrs Thatcher, intent upon attacking Brussels spend-thrifts, was bound to end up attacking British farmers. From the farmers' point of view, things look rather differ-

ent. They see themselves as victims of successive governments' enthusiasm for self-sufficiency in food. Asked, in 1973, to ensure that Britain's accession to the Treaty

of Rome did not lead to a dam-aging rusb of EEC food im-ports, farmers have performed well. They produce 62 per cent of Britain's food, compared

of Britzin's food, compared with under 50 per cent in 1972. The figure is 77 per cent if you exclude crops which cannot be grown in British weather. Britain still, however, bas a sizeable food trade deficit, at a ratio of about 2:1 imports to exports, in money terms. Pulled by juicy CAP prices, pushed by advisers from the Ministry and sustained by a technological revolution which technological revolution which is still boosting yields in almost every sector, British farming has performed a miracle of

livers almost 5,000 litres of milk a year, against less than 4,000 a decade ago. If our manufacturers' productivity had matched that of our bens—eggs per bird up 10 per cent—Japan would not have had a look-in. By making arable farming economic ou marginal land, the CAP has quite literally changed

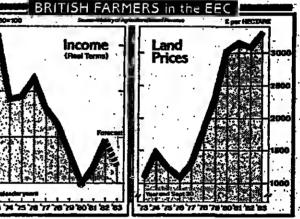
CAP has quite literally changed the British landscape. Offseed rape, whose brilliant yellow flower will soon be chequering the countryside from the south coast to Scotland, was almost unknown before 1973. Last autumn, 261,000 hectares of the

uncertainties about estimating the impact upon dairy farms since these vary so greatly suggesting widely differing courses of action for different But as he faces this new era

dairy farmers going out of business NFU economists, how-

ever, admit that there are great

just how fat is the British farmer? The answer is that he is, on average, asset-rich but cash-constrained; a distinction which polemical portraits sel-



crop were planted-a 17.2 per cent increase on the year before, The reason is CAP subsidies, which are part of Brussels quest for self-sufficiency in oils. of 1982.

enest for sen-sumcrency in ones.

Even here overproduction is becoming a problem and rapeseed prices are to be cut by 2 per cent under the new deal.

As Britain has moved from being part of the solution to tha community's agricultural problem. lem-a bungry market in 1973 -to contributing to overproduction, most farmers have seen change coming.

The deal hammered out two weekends ago in Brussels will cut most cereal prices by 1 per cent. British dairy farmers, in With 12 per cent fewer addition to price uncertainty, workers and 2 per cent less must deal with a 7 to 10 per

Real farm income (see chart) has fallen more or less steadily alnee 1973, with the exception of the good weather boom year

Strapped for cash, farmers have borrowed heavily. Bank borrowings have risen from film in 1975 to £5.3bn — almost double in real terms.

The proportion of the average armer's income represented by interest payments was in single figures when we joined the Common Market. In 1961, it topped 30 per cent and with lower interest rates stands Williams, director of milk today at around 27 per cent. marketing services. The rise in land prices (see Out on the farms there is chart)

years, prices have stabilised and the price of poorer land has shown recent signs of weakness.

Mr Robin Leigh-Pemberton, a chieved by feeding concentrated food, consumption of Kent farmer who is also Governor of the Bank of England, took the opertunity of addressing a farming audience in January to warn that if poli-tical support for the industry weakened, banks were likely to

ecome less keen to lend. His message, he said, was "a need for somewhat greater financial prudence" during the passage through this justifiably demanding political

That is exactly what farm machinery makers and other suppliers fear. Spending on farm equipment fell by over 8 per cent in 1981 —the last really poor year for farmers—and there has been net disinvestment (an excess of depreciation over gross capital formation) in the last four

One body which without doubt has major problems on its hands is the Milk Marketing Board, the farmer-owned orga-nisation which not only distributes milk, but also owns 80 per cent of the butter factories in England and Wales.

A 10 per cent cut in milk production is expected to feed duction is expected to feed cated by Richard Body is through to a 30 per cent cut in butter output, with unpleasant fundamental reasons for an consequences for the UKa interventionist farm policy—

s consequences for the UK'a interventionist farm policy—security of supply and stability of production—are less pressing than they were in 1947, they remain deeply rooted.

It does seem; however, that the glory days of intensive markets—the Lymeswold cheese phenomenon. "Wa face a completely new situation; a new way of thluking," says Roland good at invention catchphrases williams. Objector of milk to exhort farmers to produce

has, however, under- undoubtedly anxiety, even lowed the 1947 Agriculture Act.

Intensive farming, or at least
the image of it presented by
pressure groups, has robbed
farming of its pastoral allure.
Subsidising farmers to drive
lazy cows down country lanes
is one thing. Paying them to

With 12 per cent fewer
addition to price uncertainty, pinned the industry's balance alarm. Dairy farmers, who Perhaps Mr Michael Jopling's
must deal with a 7 to 10 per
cent cut in output, enforced by
quotz.

The NFU says the deal will
cost farmers £200m in lost incost farmers £200m in lost inlazy cows down country lanes
is one thing. Paying them to

With 12 per cent fewer
addition to price uncertainty, pinned the industry's balance alarm. Dairy farmers, who Perhaps Mr Michael Jopling's
must deal with a 7 to 10 per
cent cut in output, enforced by
changed little and would atill
make a manufacturer green,
suggestions of mass back for the Community" or
slaughterings and bankrupicies
"Trim for the Ten" don't have
liquid asset and, farmers argue, have probably been overdone. the same ring. How about
True, the price of a good milk

cow has fallen by about £30 or much to drive prices higher in 8 per cent in the last three the mid-1970s. In the last three weeks, but dairymen have other which rose 44 per cent. It will now make more economic sense to let the cows eat grass,

One of the things which angers the dairyman most, how-ever, is the helief that the big and undoubtedly prospering cereal farmers, whose incomes have increased in real terms by 60 per cent in the last five years. have come through the Brussels holocaust comparatively unscatched, having been protected by German political pressure.

There is a strong feeling around though, that the arable farmers will get their desserts

Meanwhile the poor pig and poultry farmers, whose net income in the year just ending is put at one quarter of the real 1977-78 level, just wish they had benefited from a CAP regime in the first pleas.

If the political nerve of the agriculture ministers holds—a big "if" to be sure—and the cuts and quotas approach is sustained, there can be no doubt that farmers' belts will tighten. Whether the process ever could or even should go the whole radical distance advo-

ments have always been rather good at inventing catchphrases to exhort farmers to produce "Dig for Britain" and "food from our own resources,"

A service for job-seekers

employed, retrenchment by the MSC does sound odd. Why should it want to cut the budget of its employment division by Merits of its employment division by 10 per cent a year and reduce its staff by 17 per cent — to 7,000 by 1988? The effort to find jobs for the unemployed should surely be a top priority. Yet, when the MSC's nine commissioners (three of them union representatives) discuss the proposals pert week they

the proposals next week, they should listen hard to the logic behind the changes.
In saying it needs fewer staff

facing two realities. First, the drastic deterioration of Britain's labour market since 1980 sadly has made the job centres' task easier. Fewer vacancies and many more job

Second, the 1970s saw a Second, the 1970s saw a huge upgrading of the public employment service. Seedy employment exchanges have given way to nearly 1,000 bright, orange-fronted, job centres, many occupying prime bighstreat sites. This expansion raises the question of the appropriate belance between pripropriate balance between private and public employment

Incentive

The balance has been shifted abled and long-term unem-in 1973, the Government service ployed. With that safety net, it filled only 16 per cent of vacan-should be free to experiment cies; now it fills a quarter. The There is a case for putting job MSC has at least a case in sup-points in supermarkets, lib-posing that greater efficiency raries, post offices and church rather than further expansion halls, and why not consider should now be sought.

Unlike private agencies, job job centres, for example, at centres do not charge weekends in busy city centre employers. So taxpayers sub-offices?

THE Manpower Services Commission bas just announced plans to reorganise its national network of job centres, provoking a hostile reaction from the unions and the Labour Party.

When 3m Britons are still unemployed, retremely and the labour party.

Job centres can practise reverse discrimination: 48 per cent of the candidates they offer for jobs are the long-term oner for jobs are the long-term nnemployed. The public service also reaps economies of scale: Its average cost of filling a vacancy is only £70, well below private agencies' costs, and it fills vacancies about fiva days faster than anybody else.

In saying it needs fewer staff and a smaller budget, the MSC's employment division is facing two realities. First, the detailers of the service, the MSC's proposals for reshuffling its resources look sound. By squeezing the middle and increasingly under-utilised tier of urban job centres, the MSC can beef up its main city centre offices and increase the

> service. The MSC is reducing staff by exploiting the trend towards self-service (the unemployed do not want tea and sympathy) and by greater use of computers and videos. Psychological studies show that job seekers consider more diverse jobs when self-service replaces indi-

vidual counselling. Critics should remember that the MSC is committed to maintaining its services for the dis more flexible opening bours for

Transatlantic car rally?

"I believe the pendulum is about to swing back in favour of British cars in the U.S.," says Malcolm Bricklin, explain-ing why be is in London. "The ing why be is in London. "The success of Jaguar has pushed open the door. Remember, Britain used to sell 200,000 cars a year in the States. Now the total is below 20,000."

The tall, energetic Bricklin has already ensured himself at least a footnote in U.S. motor ndustry history books.

He set up a company in the States with \$12,000 in 1968 to import Subaru cars from Japan. The company now sells 150,000 cars a year and is worth, be estimates, \$500m on the over-the-counter market.

Bricklin sold out to Fuji, the producer of the cars, in 1974 because he dreamed of making his own sports cars. The venture failed because he could not get the manufacturing quality right. "I don't want anything whatever to do with manufacturing from now on,"

Ha returned to the car import business in 1982 when Fiat



"I thought we'd win easily until they changed the rules at half-time"

Men and Matters

Bricklin set up International Automobile Importers to deal Automobile importers to dear directly with the companies which previously made Fiat's sports cars—Bertoni and Pinin-farina. Those are the badges on the cars which by June, be says, should be selling at the rate of 700 a month. rate of 700 a month.

Bricklin now wants to expand; which is why be is in Britain "testing cars to see what's available."

His search will lead him inevitably to Austin Rover, Britain's only volume car producer which, coincidentally, is hoping to get back into the U.S. market in 1986 and says it will probably need a part of the control o probably need a partner there Bricklin has not made formal contact yet. But he points out: "If they want an importer, we're the only independent with experience there is in the

Hot and cold

A solar-powered freezer sounds something of a paradox. But the lateral thinkers at Bognor Regis, Sussex, based Lec Refrigeration have developed just that Not for use in Bognor, sunny as that resort can be, but in the parts of the world where

electricity does not reach and the sun does.

The freezer might be ideal for gin-and-tonic drinkers on safari, tet it has a much more serious purpose — keeping vaccines cool and making ice in which they can be trans-

BP Solar Systems, who make

the panels, has won approval for the freezers from the World Health Organisation, and there are 20 out on field trials.

They sell for a hefty £3,400 each but, once set up, the running costs are low. The battery stores power to keep going through the night and for up to six sunless days. Some day

withdrew from the U.S. market. I there could be solar freezers Bricklin set up International throughout the Sahara. Every Automobile Importers to deal oasis should have one.

Taking care

When you run a firm like Alex Ball's Business Intensive Care, performing operations on alling companies, you very soon learn to recognise some symptoms of small business troubles.

small business troubles.

Ball, aged 61, an industrial engineer turned management "trouble-shooter" for EMI, and later a consultant with Price Waterbouse and the Economist Intelligence Unit, started his own management practice in 1975.

Last year, ba claims to have saved 20 clients—generally by doing what needed to be done rather than merely drawing up

some of the danger signs to watch for in a small company, he says, are a chairman aiming for a knighthood; or a chair-man unwilling to inject new equity for fear of losing control. A move to new, prestige offices is often tha way into difficulties, Ball says.

He is wary also of managers who have taken over from their parents; and of wives who do not let their husbands pledge

the family home as a guarantee against the company.

The Marriage Guidance Council and the Pregnancy Advisory Service have at times. been useful contacts, Ball tells me, "You've got to be pre-pared for anything in this

Many a slip

Nothing can be taken for granted in the fast-moving world of the Unlisted Securities

which includes a report on con-troversial stamp-dealers Stanley

The report was printed one day after the Stock Exchange withheld permission for deal-ings in the company, because of allegations against its then chairman, but three days before the company abandoned its attempt to come to the USM.

"Following the delay of the placing, Grieveson concludes confidently, we would recom-mend a weak hold for the

Garden party

Many of the craftsmen and plant specialists who came to lay out their exhibits for Liverpool's National Garden Festival neat month have completed their work—though not without the odd bloomer.

The British site managers knew they might have some problems when the Chinese asked for 10 gallons of pigs blood to use in preparing the paint for the pavilion they have built.

A suggestion that they might use turpentine instead was rejected; and so two drums of pigs' blood were duly provided from the local abbattoir. The Turks turned up flustered after their lorry had

been stopped and assrched by customs officials in Germany. Acting on a false tip that there were drugs on board, the officials almost ruined the Turks' mock coffee house. Japanese gardeners ordered two bags of lime but through some error of translation were delivered 20 tons of limestone

chiopings:
Top marks for flexibility go
to the Spanish They held a
national competition to design a garden but when the winner arrived be was informed that

the stone windmill he wanted could not be built in time. Within five minutes, the Spanish team had designed another sarden on the back of an envelope, and a week later it was ready.

Observer

HEAR

... Who could fail to wax lyrical in a sumptuously: appointed conference suite at the Inn on the Park? Such beautiful surroundings are enough to turn even the most reserved company spokesman.

into an orator of legend. As an arena in which to discuss affairs of business, there is simply nowhere more conducive to inspiration, more attentive to detail, or more richly

memorable than the Inn on the Park. Whatever the matters in hand, whatever the numbers involved, the inn on the Park can make your every resolution stand out in a style nothing short of magnificent.

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Inn on the Park

FOREIGN AFFAIRS: EUROPEAN DEFENCE

1954 comes round again

By Ian Davidson

By RIGHTS, the political situa-tion in Europe ought to be a cause of hand-wringing despair. Eleven years have passed since is some concrete evidence that Britain initial the European it is not suct withful thinking: Eleven years have passed since is some concrete evidence that Britain joined the European it is not just wishful thinking; and the member and there are several general states are still haggling with restates are still haggling with releatless obstinacy over relatively small amounts of money,
which would look tiny if they
apent half as much energy trying to make the Community
market-place work better. At
last week's meeting of the
last week's meeting of the
passe was so total that there
was no negotiation at all.

By rights, this deadlock

By rights, this deadlock

By rights, this deadlock

Teasons why the European countries should start treating their
relationships with each other
with a seriousness which has
long been lacking.

The most concrete evidence
of political rapprochement is
the flowering interest, especially
in France and Germany, in
closer European countries should start treating their
relationships with each other
with a seriousness which has
long been lacking.

The most concrete evidence
of political rapprochement is
the flowering interest, especially
in France and Germany, in
closer European countries should start treating their
relationships with each other
with a seriousness which has
long been lacking.

Family

spending, especially on agriculture, are within grasp. There will be a mechanism to limit Britain's financial contribution; all that remains is to set the figures which will set the

mechanism geing.
The second explanation for the apparent serenity is more

and there are several general reasons why the European coun-tries should start treating their

By rights, this deadlock should be provoking cries of alarm all round, larded with bitter denunciations from the Continent of Mrs Thatcher's treaty. The French government alarm all round, larded with bitter denimications from the Continent of Mrs Thatcher's lack of any Community spirit and her grasping demand for every last sou. The Community budget is over-spent, and will go more deeply into the red as a result of the expensive presents which the farm ministers have given each other, to ease the pain of their belated first steps in reforming the Common Agricultural Policy (CAP).

By rights, the air should be vibrant with rage and recrimi-

the Common Agricultural Policy (CAP).

By rights, the air should be vibrant with rage and recrimination. Why then is the atmosphere so calm, so apparently aerene?

There are, I think, two complementary explanations. The first is that the package deal is so complete in principle, and so nearly complete in detail, that an overall settlement is not in doubt and need not be far off.

Farm ministers have taken the first painful step towards reform of the farm policy. Tighter controls on Community spending, especially on agricultural mental choice-point in tha proyet it is almost as if a phase in European history, a fundamental choice-point in the process of European integration, which the Europeans bungled thirty years ago, were coming around for the second time; perhaps they will bungle it again.

In 1947, Britain and France signed the Treaty of Dunkirk, against a revival of German ag-



President Mitterrand (left) and the late President de Gaulle

the Berlin blockade in 1948-49 and by the outbreak of the Korean War in 1950, America was already pressing for Germany to be re-armed as a full member of the western camp. To overcome still-vibrant fears of German militarism, the French proposed (in the Pleven Plan) a European Defence Community, with an integrated European army index the European army under the authority of common European political and democratic insti-

The German social democrats resisted the EDC and the sister plan for a European Follical Community, just as they resisted the establishment of the European Coal and Steel powers enlarged the treaty uncommunity in the scheme. the apparent serenity is more fundamental, and much more speculative, and it is this: it begins to look as though the circumstances for a political rapprocement between the main countries of western Europe may be more propitious now than at any time in the past 30 years.

Given the nationalistic bickering which bas hobbled the Europe in Eastern Serening which bas hobbled the Europe of the European Coal and Steel Community, partly because they were opposed to any political integration in the West which might mortgage the prospect of German reunification. But by a sac on description of the European Coal and Steel Community, partly because they were opposed to any political integration in the West which might mortgage the prospect of German reunification. But by a sac on description in the West which might mortgage the prospect of German reunification. But by a sac on description in the West which might mortgage the prospect of German reunification. But by a sac on description in the West which might mortgage the prospect of German reunification. But by a sac on description in the West which might mortgage the prospect of German reunification. But by a sac on description in the West which might mortgage the prospect of German reunification. But by a sac on description in the West which might mortgage the prospect of German reunification. But by a continuous now than at any time in the countries.

In 1949, Nato was formed; by all the original Six, except the following year, as a result year, the National Assembly in the following year, as a result of the European Coal and Steel community, partly because they were opposed to any political integration in the West which might mortgage the prospect of German reunification. But by a sac on description in the West which might mortgage the prospect of German reunification. But by a sac on description in the West which might mortgage the prospect of German reunification. But by a sac on description in the West which might mortgage the prospect of German reunification. But

The EDC was defeated partly by an unholy alliance of Gaullists and Communists, who were opposed to German re-habilitation and re-armament or to any surrender of French sovereignty, and, more genermade repeated efforts to per-suade the British to join; but Britain was only prepared to support, not to participate in

relations since the Cold War; purely European treaty body. Afghanistan echoes Korea, the Polish crack-down the Czechoroush track-down the Czecho-slovak take-over; the U.S. pressure for more European defence spending (and the deployment of Euro-missiles) schoes the U.S. pressure for the re-armament of West Germany; then, as now, the SPD was looking East; then, as now the initiative for European defence co-operation came from France; and as if determined to echo the Berlin blockade, the Russians are again interfering in the civil

are again interfering in the civil air corridor over East Germany.

In practical terms, WEU was intended to do very little, and it faithfully lived up to that modest assignment; all defence responsibilities were immediately delegated to Nato. The chief importance of the treaty them was its political symbolism, and it remains its chief importand it remains its chief import-For example: the most serious

blow against joint European security was struck by General de Gaulle in 1966, when he withdrew France from military integration in Nato. Ever since then it has been Gaulist doctrine that France retains complete freedom to decide whether or not to line up with its allies against a Soviet attack. and in this respect the rhetoric of the Socialist government is as Gaullist as its predecessors.
Yet the Brusseis Treaty
rigorously excludes any such sovereignty, and, more generally, because many Frenchmen North Atlantic Treaty wave still afraid of Germany, clear loop-holes for governments to opt out of the common but the Brussels Treaty to opt out of the common defence, but the Brussels Treaty is categoric: 'If any of the High Contracting Parties should be the object of an armed attack in Europe, the other High Contracting Parties will . . . afford the Party so attacked all the military and other wild and acceptance in their

For example: some people

in this country think we should disband BAOR (the British Army of the Rhine) in order to pay for a really splen-did navy, dispensing law and order throughout the world. In itself, the idea is absolutely dotty. But the WEU treaty requires Britain not to withdraw its army and tactical air-force from Germany against the wishes of a majority of the other member states. WEU is a symbol of Britain's continen-

between 1949-54 and 1979-84, there are also enormous political and psychological differences. The EDC was scuppered because its wild federalist amhitions, designed to keep German militarism under control, were totally incompatible with the nationalist dreams of glory still nurtured by Britain and France. Today. France's main anxiety is not of German militarism, but that Germany may drift off into an unattached neutralism. Britain's imperial delusions bave heen reduced to the exhausting defence of 1800 souls in the south Atlantic, and souls in the south Atlantic, and even Mrs Thatcher's govern-ment has concluded that, in the handling of East-West relations, it has more in common with France and Germany than with Ronald Reagan's America; when it comes to Star Wars and technology transfer, the community of European interests is even more ohvious.

Of course, some things do not change. Then as now, the initiatives for closer European co-operation come from the Continent, Chancellor Kohi bas promised a new initiative later in the year for closer political integration in Europe. Then, as now, thet characteristic British markable speed. Within two other aid and assistance in their months, the Brussels Treaty power." If the French Governant wishes to breathe new life into WEU and its institution of include Germany's (and Italy). The way was now open to end Germany's status as an occupied territory, to restore it to full sovereignty, and to enrol it as a full member of Nato, which took place tha

Lombard

The Donald Duck tax effect

By Anthony Harris

the Cat-I am as old as that) eral steps before they noticed the void heneath. The technicians of comedy call it tha slow burn, I believe.

The trouble is that companies and their accountants have only themselves to blame. They have

It must, I suppose, he this buried memory which has made me greet British industry's re-action to the Bndget with such unseemly amusement. Mr Law-son said quite clearly what ha was doing; but it has taken a solid month for the fuse to hurn, and for industry to won-der if it may not be treading

Now, by letter, circular and telephone, tha squawks are coming through. This change is actually going to make us pay more tax, even when the rate is cut. It is going to reduce the return on any given investment. And, Good Heavens, if inflation to be in a cash squeeze again. One would bardly believe that the Chancellor had said, in so many words, that be intended to reduce the tax privileges of capital investment, and to abolish the concession which had been made necessary hy

What all this means, of What all this means, of course, is that, as Mr Lawson also said, you cannot reform tax without making some people worse off; and it is natural enough if they then wonder whether the reform was a good idea in the first place. It is this debots which it courselies of the course of th debate which is now getting off to a helated start; and because it is so belated, the criticisms are going to be somewhat muted. If you want to make a loud protest without looking foolish, you have to make it

ONE OF the great pleasures of need to maintain their stocks my childhood was watching and replace their equipment.

Donald Duck (and even Felix This is perhaps meant to stiffen the resolve of employers to keep costs (and thus inflation) in those sequences where they in check; and here the slow would walk off the end of a burn is discouraging. Will plank or the edge of a cliff, paople who were so slow to and carry on blithely for sevrespond to this incentive?

> The trouble is that companies themselves to blame. They bave had a decade since the ill-starred Sandiland Report to make sense of inflation accountmake sense of inflation accounting; perhaps because the tax concession gave them tha fruit without bothering to tend tha tree, they have failed. The vanity of misleadingly high historic cost profits has defeated commonsense, and Mr Lawson has now brought hack the tax on vanity. the tax on vanity.

The debate on the tax treatment of investment is a much more complicated one which no space here to answer all the special pleaders, economic Stalinists, admirers of Presi-And, Good Heavens, if inflation dent Reagan who have begun sbould accelerate, we are going to find their voices—not to mention the architects of the former regime. Sir Douglas Wass could state an elegant case against Mr Lawson. For the time being, I will make just two points in his favour.

First, the case cannot be argued simply from the point of view of companies. The point where it makes sense to substituta labour for capital cannot be the same for companies. which need pay only those still employed, as for the rest of us, who bave to pay the unemployed. Until now Mrs
Thatcher's Government bas
seemed blind to this obvious
fact. It is refreshing to have a Chancellor who is not.

true, as critics argue, that the new regime will depress the re-turn on capital. It will raise the cost of capital (except of and to enrol it as a full member of Nato, which took place that not prevent the French floar admitting de Gaulle was wrong admitting de Gaulle was wrong mustn't cut across the European Community, perhaps we don't really need to remobilise yet there is vary little to be said by economist must know, another set of institutions. Yet in theory for what Mr Lawson tends to raise the return on least suggestive. The early 1980s have seen the worst deterioration in super-power an American general; WEU is a mustn't cut across the European Community, perhaps we don't really need to remobilise yet there is vary little to be said by economist must know, another set of institutions. Yet in theory for what Mr Lawson tends to raise the return on has done. Companies will, even the real return, which deterioration in super-power an American general; WEU is a hostile."

Co-operation. on defence

The Joint Working Party on these weapons.

European Security in the EuroThe R and D programmes pean Parliament has spent most such as tose for the stimulation of its time during the past 31 years exploring the possibilities uon, preparing the ground for ties with military spin-off, on seminal reports in the European Parliament, and informally exchanging observers at mology to the U.S. defence plenary sessions with the Assembly of the Western Assembly of the Western European Union and latterly with the North Atlantic

It might help readers of the Financial Times, and in par-ticular Ministers, to consider how hest to use national and European parliamentary institu-tions to achieve the desired co-ordination. Better to achieve a degree of overlap between them than to pursue a mindless inter-institutional demarcation.

dispute.

The subject is so important as to merit the systematic use of these political tools in order provide ministers with the guidance they need, where each institution contributes accord-ing to its competence and ex-

Thus the European Parliament can contribute practically in the following areas: 1—U.S. emhargo of the Soviet Union concerning key elements of the Urengoi gas pipeline; this matter has been debated on several occasions in the European Parliament, includ-

ing the recent report by Mr
Allan Rogers MP, MEP on
Community gas policy.

In these discussions prior recognition of Irish neutrality favours rather than inhibits the pursuit of those security objectives which other member states and political groups.

share. The European Parliament is making inputs on security matters, the quality of which ministers must judge. It is a parliamentary institution which has ahown vitality in debating security matters with its facility

2—Rationalisation and coopera-tion in the acquisition of weapons technology, the Euro-pean Strategic Programme in

of scientific and technical potential of the European Com-

a forum for the parliamentary Sir.—May I take up the point representatives of nine and made by Mr Burndred (April shortly 11 European Nato 3) who suggests that all PAYE states; it exchanges parliamentary delegations annually with, among others, the US Congress, LAFTA, ASEAN, the Gulf States and the People's issued by the Revenue in time Republic of China where security issues are raised.

Yellow discussions union

to raise urgent issues on a monthly basis with the Con-ference of Foreign Ministers.

Letters to the Editor

Peter Varmeck. Chairman of the Joint Working Party on European Security. Centre Europeen, Plateau du Kirchberg,

From Sir Lawrence Airey, Chairman of the Board of Inland

issued by the Revenne in time to be brought into effect at the start of the tax year.

It is an attractive idea, but I am afraid it does not reckon with the calendar. Bndget Day can, and sometimes does, fall after tha start of the tax year: thus, in 1978 it was on April 11.

And where the Budget comes And where the Budget comes before April 6, as it has done in before April 6, as it has done in recent years, there is a great deal to be done between that announcement of personal tax changes in the Budget and their implementation for PAYE.

This year, for example, the parts of the tax tables dealing with tax at the higher rates need to be received and

ference of Foreign Ministers.

It is to be hoped that a desire for economy in organising international parliamentary consultation will pervade ministers'

with tax at the higher rates need tries where Council Orders still to be re-calculated, printed and obtain are school or college distributed. That is why these leavers who have attained 18, at which age they must be paid the adult rate from the time of engagement.

the lines of the present arrange-ments. However, I can assure Mr Burndred that we do our

in my earlier letter, under which the great majority of coda changes flowing from the Budget do not need individual notifications but are done by employers making a fixed alteration depending on the code made by Mr Burndred (April 3) who suggests that all PAYE Suffix, are an example of this. Done this way, the job is simpler for employers, as well as for the Revenue, than handling a large number of separate instructions for code changes. Lawrence Airey.

> Somerset House, WC2 Abolition of wages councils

Inland Revenue

Mr J. F. Greenhough Mr J. F. Greenhough

Sir.—Practical economics, not textbook economics must dictate the abolition of Wages Councils. Like so many anachronisms in our legislation, the councils were intended to protect the very young when the school leaving age was 14 or 15. Now, new entrants in the industries where Council Orders still obtain are school or college leavers who have attained 18, at which age they must be paid

This causes resentment 'among trained workers who are reluctant to pass on bard-won knowledge to those without experience who are paid the same amounts. But where employers are macrupulous and intend to have below the Ward County Sir.—Your leader, "Cooperaon Defence" (April 10) is a
Information Technology
sensitive analysis of the problem of getting the European in the defence sector with the nations to act together to nations to act together to defend the freedom they share.

Weapons secundary, the best page and strategic Programme in Information Technology
sensitive analysis of the probin the defence sector with the for economy in the achieveneed of the freedom they share.

Weapons secundary, the best page are unscruptuous and mend to pay below the Wages Council rate, they merely break the law see no practical alternative to doing the job in two stages, on the lines of the present arrangement of secundary.

ments. However, I can
Mr Burndred that we do our
best to keep the work imposed
on employers by the Budget,
and indeed hy PAYE generally,
to the minimum.

The arrangements mentioned
The arrangements mentioned
income tax, NI contributions
(both employer and employee)
and sometimes VAT, for when the "till" the full value of goods sold is not registered.

The Wages Council Inspectors are a conscientious hard-work-ing body and they know that their work only covers the tip of the iceberg. They only oper-ate where there are specific complaints.

The Youth Training Scheme neither gives employers long enough to know their new em-ployees, unless they are outployees, unless they are out-standing, nor rewards the young people adequately for the work they are required to do. Like the preceding Youth Opportuni-ties Programme, it is an ex-pensive failure. Only the Young Workers' Scheme helps to re-stage the differential and allows store the differential and allows the scrupulous employer to take on new young persons and train them without upsetting the balance between the inexperi-

enced and experienced.
Consider the cost effectiveness: Young Workers Scheme
£750 a year to the state, as
against £5,000 (plus) for the
Youth Training Scheme. The
Young Worker gets over £40 a
week while the YTS £27. Those of our friends who carry out similar schemes to us have an equally high rate of success and engage their young in permanent employment.

Responsible employers have always wanted a well-trained work force and before the Wages Council restrictions this was possible through apprenticeship schemes, as it still is where the council orders do not obtain. Yet the lower-paid industries deserve skilled em-ployees just as much as those in the higher technologies. . F. Greenhough.

The Danish Kitchen 9. Willows Ave, Lytham, Loncs.

Credit for suggesting Tewel in the Crown'

Sir,-In his otherwise excelvalue as a cash gift next year lent piece on "The Jewel in the I know many men who would Crown" (April 4) Christopher gladly use that money.

Turning to the fact that financial analysts and their ilk the project. Miss Shnbik, who produced the film of Paul Scott's "Staying On," suggested to Granada the Idea of televising "The Jewel in the Crown." Asher Rozenberg. 14 Downalong, Bushey Heath, Heris.

Company vehicle fuel cards and where they fall short.

As many businesses recognise, a card-based ayment system can make an important contribution to simplifying expenses procedures and controlling the costs of running a vehicle fleet. fleet expenditure, besides monthly reports On almost any garage forecourt, you'll see the signs for any number of such systems. As you may have noticed though, one sign

appears more frequently than any other-Dialcard.

More convenient coverage - and a complete range of services. Dialcard is accepted at over 8,500 garages and

Its coverage is therefore exceptional - and is not confined to a particular brand of fuel.

But optimum, nationwide convenience is only one of the advantages that sets Dialcard apart. In contrast to cards which are for fuel only, the basic Dialcard system takes care of all the other items of expenditure that running a company vehicle involves - servicing, repairs, tyres, exhausts and batteries.

When the object is to gain a tight grip on fleet costs, a card that doesn't cover everything obviously falls short of perfection.

Monthly expenses comparisons, vehicle by vehicle.

To give you positive management control of detailing each separate transaction, Dialcard provides you with comparative costs-per-mile, fuel consumption and cumulative mileage analyses for every individual vehicle in your fleet.

With Dialcard, you automatically obtain the kind of accurate, up-to-date management information that helps to achieve total accountability of your vehicle fleet overheads. Dialcard streamlines administration and

accounting routines too - instead of possibly hundreds or even thousands of separate bills and till receipts, you receive one single master VAT invoice per month which covers your entire fleet of cars, vans and HCVs. Dialcard is obviously a management tool you

will want to know more about, particularly when you realise that fuel and garage services for an average company fleet of one hundred typical cars and light vans costs around £170,000 annually. To find out more about Dialcard, phone now or ask your secretary to get in touch with us and ask

Dialcard Limited, Wellington House, 154 Upper Richmond Road, London SW15 2SQ. Telephone: 01-785 7331. Telex: 28165.



The fleet cost control system that leaves nothing to chance.

The debate on accounting for inflation

From the vice-president, Staffs, Salop and Wolverhampton Society of Chartered Rather the figures which is

Accountants
Sir,—It is encouraging to see that the debate surrounding accounting for inflation is considered important enough to be the subject of your leading article on April 6. As to a new start for

acountants, however, I doubt it. At the most it is the beginning of another chapter in an ining or another coapter in an increasingly long discussion which is getting nowhere. Merely relegating the SSAP 16 statement on which it is proving impossible to achieve a consensus to an ancillary note in a limited number of accounts cannot as you say, berald much

But the failure does not, as you imply, arise from any difficulty in account to failing to distinguish between CPP and CCA. There can be few now that cannot understand the basic principles involved after the considerable discussions

Rather tha difficulty lies in the figures which the various methods used so far have produced. They simply are not comprehensible enough to give answers which can be readily and easily explained to the business community generally. business community generally, a position not eased by mostly showing results opposite to those business's would like to

It therefore follows that accountants will have to accept a lowest common factor approach and work from there in building up a more sophisticated system for the future. I suggest that at present this consists of two things.

First, a provision in the stan-

principle of showing a true and Lawson's withdrawal of stock fair view.

How this is done would have inflation are over and assumes

to be left to the reporting com-panies themselves. They have bolders, stockhrokers and finan-received enough suggestions cial journalists do not enquire over the years to guide them. as to his current cost accounts
Second, an adjustment of profit trends is needed to allow account for inflation) inflation for comparability.

These suggestions are by no operations.

means new, but they do require further consideration many company chairmen has before the new start forecast is allowed to occur and we continue the chancellor as a gift from tinue with what has become largely a purely theoretical exercise for accountants. W. E. Dann, Stock Exchange Buildings,

33, Great Charles Street, Queensway, Birmingham. From Mr J. W. L. Nichols Sir.—I deduce from Mr Lees's letter (April 4) that he does

not favour any form of inflation adjustment to his historical cost He seems to deduce from Mr Halesworth, Suffolk.

does not affect his company's

the Chancellor as a gift from the Gods(?). If Mr Lees does not want 45 per cent or whatever, of 5 per cent of his stock

do not ask about GKN's CCA results does not mean that inflation does not have a deleterious effect on that company's results. J. W. Nichols. Hill House, Holton St Peter.

FINANCIAL TIMES

Monday April 16 1984

Trollope & Colls (City) BUILD WITH CONFIDENCE call Patrick Trollope 01-377 2500.

Terry Byland on Wall Street

Short shrift for thrifts

NO SECTOR has suffered so severely from the pessimism over U.S. interest rates as the savings and loan companies, which have plunged from the role of market favourites to that of pariahs in less than twelve months.

The combination of high shortterm interest rates and the long span of the average mortgage caused the distress of the S & L industry in the 1970s, but it may be that the current weakness in stock prices is overlooking the industry's readiness to respond to the changes wrought by the introduction of "securitised" mortgages, which has created a strong secondary market for housing finance, and of adjustable rate mortgages.

Stocks of the 150 or so major savings and loans groups, or thrifts, as they are known, have seen their prices fall hy about a half since the peaks of midsummer 1983. There was a slight hardening of prices in the middle of last month, but two prime rate increases since then have discouraged the optimists.

The thrift stock price index com-piled by Becker Paribas now stands at 174, about 40 per cent off its peak in July 1983, and has fallen by 16
per cent since the beginning of this
year. (The index has a 1973 base of
100 and takes in eight New York

is the ecommunications group.

Reuters confirmed yesterday thet
it is no longer interested in the Barclays Merchant Bank stake in Merstock exchange stocks and 18 over-

Results for the first quarter, due this month, are unlikely to hring much recovery

The second quarter, however, could see the first benefits of a turn of financing in favour of the thrifts. Quite apart from any longer-term considerations, it will bring the refinancing of the very expensive 30month certificates of deposit with which the thrifts filled their books at the end of 1981. Becker Paribas reckons that about 8 per cent of to-tal industry deposits consist of

The S & L industry learned about inflation the hard way in the late 1970s and has taken great care to restructure mortgage portfolios. Thrifts have hastened to convert mortgage loans into securities by obtaining participation certificates from the federal agencies concerned. This allows mortgages to be sold on, limiting the thrifts' expo-

sure to interest rate trends.

The thrifts have also taken full markets. They have become heavy sellers of CDs.

Mr Jonathon Gray, of Sanford C. Bernstein, believes that the major Californian S& Ls, which are the heart of the industry, will have "vir-tually eliminated their interest rate

exposure" within 18 months.
At this point, he comments, the S & L stocks will be closely akin to those of the regional banks, although the current price-earnings ratio of about 5.5 on the thrifts is only about two thirds of that on bank stocks.

There is just on caveat hanging over S&L stocks. Adjustable rate mortgages, which are the major support of the currently booming U.S. housing market, as well as of the mortgage business, could be a

time bomb.

The initial wave of these mortgages, which offer the borrower low rates for the first few years of the mortgage, come up for readjust-ment next year. If interest rates are still high, there could be e further upsurge in mortgage delinquencies which have been climbing strongly since 1980. The effect on thrift company earnings of such a development has yet to be computed in

Some industry leaders have for-seen the danger. Both Great Western Financial and H.F. Ahmanson two of the oldest publicly quoted thrifts, index their adjustable rate mortgages to the industry's cost of funds, which at least assures them of stable spreads.

It may be that the continuing fear of higher interest rates is having an undue psychological effect on the stock prices.

"There are few savings and loan stocks you would not want to own, if rates turn lower," is the way Mr Gray puts it.

World Weather

BRITISH FOREIGN SECRETARY STARTS VISIT TO CHINA

Howe to focus on future of HK

HIGH-LEVEL talks between Britain and China over the future of

Hong Kong are to be held in Peking today, when Sir Geoffrey Howe, the British Foreign Secretary, meets his Chinese counterpart. Sir Geoffrey and Wu Xueqian are

to meet for several hours of discussions. The talks are the first at such a high level since Mrs Margeret Thatcher, Britain's Prime Minister, visited Peking in September 1982. Senior officials accompanying Sir Geoffrey say that no decisive outcome is expected but they hope the visit will give a much-needed political impetus to the tough negotiations over the colony's future which have been taking place since last

The British team hopes that Sir Geoffrey will meet Deng Xiaoping, the Chinese leader, on the second

BY CHARLES BATCHELOR IN LONDON

REUTERS, the international news

agency and financial information

service, has withdrawn from the bidding for a 20 per cent stake in

Mercury, the privately owned Brit-

cury, which plans to set up a private

communications network to compete with British Telecom. The

news agency's board is understood to have reached this decision at an

all-day board meeting last Wednes-

day, despite the advanced stage the talks had reached.

No reasons for the decision were

given. Mercury and its two other

shareholders, Cable & Wireless and

BP, each with 40 per cent, refused

to comment yesterday.

Reuters' withdrawal is thought to leave Pacific Telesis, a West Coast U.S. telephone company, as the only major concern seeking an inter-

It will, however, have to over-

come several hurdles. It must for

day of his visit before flying on to Hong Kong. The latest round of Sino-British talks ended last week and, with important details still to

on e brave face after the recent announcement by Jardine Matheson, the major Hong Kong group, to move its holding company to Ber-

But now that the key issue of the return to China of the territory's sovereignty and administration has been effectively settled in Peking's favour, relations have become strained between Britain's and Hong Kong's representative bodies, such as the appointed Executive

example, win official backing from

A link-up between Mercury and

Reuters would have given the for-

mer access to Reuters's financial in-

formation services and provided Reuters with a stake in its own

ent it leases circuits from national

post offices and private companies.

Barclays wants to pull out of Mer-

cury because the investment costs

are escalating and the bank is ap-

proaching the ceiling of about £30m (\$42.6m) it set on its own invest-

Reuters, which plans a public flo-

tation within the next two months,

is actively looking for other acquisi-

tions to strengthen its position in

the information and communica-

It hopes to raise about £70m for

its own investment programme from the flotation which had been

expected to value the company at about £1bn. Opposition from major

Investment associations in Britain

the U.S. and UK Governments.

Reuters drops plans to bid

for 20% stake in Mercury

be resolved, the British Government is becoming extremely sensitive to the growing uncertainty in the colony.

Of his talks with the Chinese leaders is not, according to officials, extinctions to the growing uncertainty in the colony.

Officials have attempted to put

The lease on 22 per cent of the colony and economic structure will be consonic structure will be consonic structure will be consonic structure will be consonic structure.

long's territory expires in 1997 and. China has maintained that the 1842 treaty, which cedes Hong Kong island to Britain in perpetuity, is in-

Britain now seems to have accepted the inevitability of a full handover of the entire colony after 1997 hut is attempting to extract the fullest guarantees possible from Peking that the colony's capitalist system will be maintained.

The UK is also still boping for

to its plan for preferential voting rights for some shares may reduce the market value of Reuters how-

Reuters is now expected to pro-vide investors with full details about the company – in the form of a prospectus in the UK and a regis-

tration document in the U.S. in mid-

May and offer its shares simultane

ously in London and New York in

Reuters and its advisers, S. G.

Warburg, the British merchant

bank, are privately believed to be

very concerned at the prospect of a

boycott of the shares by large pen-

sion fund and insurance company

The National Association of Pen-

sion Funds and the British Insur-

ance Association are opposed to the

plans to float Reuters in its present

form. It is unclear how many institutions would boycott an issue

which - apart from the preferential

There is considerable disappoint ning the colony after that date, be-ment in the colony over Sir Geof-lieving that this will calm fears of frey's decision to go initially to Pek- an insidious Communist takeover ing. The first major announcement which may lead to an exodus of cap-

> maintained for 50 years after the lease expires.

UK Government officials maintain that while "real progress" has been made in 12 rounds of talks. hopes of an outline agreement be fore June or July are premature.

Peking has set September as a deadline for a full agreement, but Britain says this may not exclude continuing talks on points of detail

BP China lease hid likely, Page 3

Salvador finds arms adequate to fight on

THE REAGAN Administration's bleak warnings that the Salvadoran armed forces are running dangerously short of munitions and equip-ment to combat left-wing guerrillas have not affected the level of com-bat in El Salvador. Nor has any member of the Salvedoran High Command gone public to back up these warnings.

The Reagan Administration, inchiding the President, has insisted several times during the past three reeks, that the \$62m emergency aid package to the Salvadoran armed forces was essential because of the dire shortage of arms and

Congress adjourned for the Easter Recess on Friday without acting on the request, but Reagan is still hoping for early approval of the

package after the recess. Mr Thomas Pickering, U.S. am bassador in El Salvador, told jour halists that the shortages would have serious effects on the Sal-vadoran armed forces ability to vacated armed intest analy in protect the second round of presi-dential voting and the interim peri-od before the installation of the new president in June. Mr. Pickering grenades, aircraft munitions, 81mm mortar rounds, medical supplies and military radios.

A Salvadoran officer said last week: "We are always short of equipment in this army. For in-

El Salvador moved its embassy in Israel from Tel Aviv to Jerusalem at the weekend, becoming the second country to return to Israel's disputed capital. Costa Rica returned its embassy to Jerusalem last year. The Israeli Foreign Ministry said the Salvadoran more coincided with the re-opening of the Israeli embassy in El Salvador, which had been closed since a guerrilla bombing

stance, we only have 19 helicopters operational at the moment. We do need medivac facilities, but the situation is no worse than usual."

In private, Salvadoran officers al-so say that with the guerrillas now operating in bigger groups - some-times of up to 400 - combat has become more sustained.

But the munitions and equipment

situation has not prevented a series of big operations in the north and east of the country, especially around San Miguel, El Salvador's third biggest city. This is the head quarters of the most effective of the new line of "dirty boots" Salvadoran commanders, Lt. Col. Domingo Monterross

Operations have involved more than 3,500 men at times and there has been no indication that action have been held back by lack of

Analysts in El Salvador believe thet President Reagan's emphasis on urgency is motivated by U.S. military advice that the army could gain a small initiative between now and the onset of the rains if it had a

greater offensive capacity.

The rains are due in early May, and positions held by this time have tended to remain unaltered until the beginning of the dry season in October. In the present dry season, the guerrillas' actions mainly consisted of sabotage and ambushes, without expanding their area of

control. It is believed in El Salvador that another reason behind the U.S. administration's eagerness for quick resupply of the Salvadoran armed forces is the use of serial reconnaissance flights with sophisticated

THE LEX COLUMN

Making a market for equity

argain with the Government implied from the outset an obligation to replace the long-trusted jobbing and broking system with a dual capacity dealing structure. To ensure that this would combine fairness with depth and liquidity was never going to be easy, but it looks as if design by committee has made the task almost impossible. The ex-change's discussion document eaves far too much open in its at-

tempt to please everybody, yet it ends up by appearing to endorse a solution which – like that classic compromise, the camel – seems to combine most of the available dis-

dvantages.
The mere fact that there is so little time available for making such a radical change is in itself a powerful argument for building the powermi argument for binking the new system from tried and tested machinery, in a sense which goes beyond the obvious and pressing need to commission the necessary electronic hardware in the next few

months.

Sheer practicality ought to dictate that the market practices which the exchange adopts are pretty well known in advance to be reliable under the sort of trading volumes which they are expected to bear. That alone probably rules out any attempt at technological leap-frogging, such as perhaps aiming for a purely electronic exchange with no trading floor, it also argues strongly against the adoption of any market structure whose working makes more than the minimum of claims on the patience (and bon-esty) of the traders who are meant

This admittedly unadventuro criterion suggests e fairly direct, even slavish, attempt to transfer structures that have stood up well o extremely heavy traffic in the U.S. The bricks - the Big Board and Nasdaq - are there even if it may be

To try to keep alive some shadow

pears to recognise. While there could be distinctive aspects of the London equity market which many members of the exchange may wish to preserve, such as the wide variety of securities which are at present traded under the same umbrella, it is questionable whether all the desirable features can be kept going by the invention of a distinctively aborate unified trading system.

Yet this is what the com seems to be proposing when it puls the brant of its effort into drawing up an approach in which some of the competing broker dealers function as market makers (in a given stock) while the rest are obliged to let a market maker see their bar-

Whichever side of the market place it is viewed from, this set up appears to suffer equally from the requirement that bargains have to be exposed to market makers (unattractive from the perspective of those who plan to operate mainly as agents in matching trades) and from the offsetting proposal that -on the floor of the market only prices and spreads should be con-tinuously published (which prospec-tive market makers feel would show too much of their hand). Both feel that such a market might break

The natural fear among market makers is that in a market supplied with continuous information on all the competing spreads, most of the trade would be done by perasitie are clearly workable for the most broker dealers. active stocks, eithough it must be a

broker-dealers. Market makers might see little of the business, and could end up dealing the wrong way on those bar ingirt in the integrated world margains that they see. Though the ket. Sometime along the lines of rules would clearly be framed to ex. Nasdaq would be suitable to a clude this possibility it is a line of the lines of clude this possibility it is a line of the lines of the lines of clude this possibility it is a line of the lines of the rules would clearly be framed to ex-clude this possibility, it is asking er stocks (or those unwilling to face rather a lot of market makers to be-lieve that other includes any trails in lieve that other dealers can truly be disclosure or voting). At least there prevented from executing most here is no doubt, thanks to full less trade gains at net prices, no questions

Only someone on the right course

that the requirement of exposure wears its efficiency on its face.

can help you with yours

and curb the broker dealer's free dom of action as a principal. The document itself recognises that market makers may often be competing with the very dealers who are obliged to expose orders to them, so the exposure rules could hand market makers the chance to frustrate the business of fellow bro-

This again might lead to a pre-dominantly net market, entailing that investors generally obtain secand best prices. In addition, the proposed absence of "last trade" infor-mation puts a heavy burden on the faith of investors, as it does on the regulatory authority.
Worse still, if it became clear that

ss within the market being done on this fragmented and inefficient basis, the inducement to large international brokers to set up "third markets" trading off the back of the exchange might outweigh the attractions of formal membership. There is a chance that most of

these snags can be avoided if the exchange is prepared to consider a two-tiered market, with trading systems appropriate to the different types of security. The equity manwww.or much of their hand). Both ket is already highly diverse, so il that such a market might break there need not really be any objection, or at any rate become illiquition to further diversity of dealing method, particularly if this is the price for ensuring that the whole market is traded efficiently and

. Anction/specialist arran information, that Nasdao is highly efficient. The advantage of an auc sked. efficient. The advantage or an auc-The complementary nightmare is , tion for blue chips is that an auction

UK printer axes 900 jobs as demand for bank notes falls

BY JAMES MCDONALD IN LONDON

iary of International Banknote Corporation of the U.S., is to cut 900 jobs at its main operating plant near London because of a serious shortage of orders for bank notes

and other security printing.
This decision will reduce drasti-cally Bradbury Wilkinson's workforce in Britain from the present level of around 1,600. Bradbury Wilkinson and the De

La Rue Group have been traditional competitors in the security printing field, seeking orders to print bank notes and cheques for customers in about 60 countries. It has been a lucrative business for both compa-

But in recent years, many of these customers have set up bank note printing plants to produce

land last year issued only 1.62bn new bank notes, compared with 2.06bn notes in 1973. Bank notes are in less demand as almost every de-

veloped country witnesses a rapid growth in cashless payment ser-Redundancies at Bradbury Wil-kinson will come into effect this summer and the company says for-mal consultations with the relevant

trade unions have already begun. Sogat 82, the print union, is the major union involved. In December, 1982. Sogat members carried out a three-week strike in protest against planned joh cuts by Bradbury Wilkinson and the 500 planned redun-dancies were reduced by about 150. The company plans to increase

BRADBURY Wilkinson, the British security printer which is a subsidiary of International Banknote Cor
Even in the UK, the Bank of Engertions will be moved. Employees at the London plant will be offered jobs and relocation, where possible, in the Cornwall area. Additional premises in the Plymouth area also

have been acquired. Mr Gordon Hall, chairman of Bradbury Wilkinson, said yester-day: "We have tried to limit the number of redundancies to the very minimum. However, we are dete mined to ensure that Bradbury Wilkinson, as a leading world security printer, remains a force to be reck-

Apart from its London and Cornwall plants, the company has opera-tions in Sussex, and Buckinghamshire. It also has joint venture projects in New Zealand and in the Far

Mauroy confronts Communists

Continued from Page 1

An official of the pro-socialist CFDT union also said that the redundancies were "unaccept-

In an effort to avoid another major labour confrontation, the Citroën management has trodden warily in presenting the planned labour force reduction. Before Friday's meeting it sounded out the mainly in grant workforce at its Paris-based plants to find how many would return voluntarily to their

countries of origin. Of 4,700 consulted, however, only 4.5 per cent were ready to accept bonuses of FFr 70,000 and

S 18 96 Streetman
F 18 81 Sydney
S 19 88 Taipai
- - - Langiar
8 19 88 Taipai
1 49 104 Tai Aviv
R 8 47 Tennile
C 18 81 Tennile
C 15 59 Tennile
C 5 41 Tanix
S 22 88 Taipai

leave. Citroën employs about 10,000 immigrants - mainly North Africans - in the Paris

The group is also offering retraining schemes and a shift to part-time working in an effort to bring the number of redundan-cies below 2,000. About 3,100 workers will be taking early re-

In striking an aggressive pos-ture, the CGT is auxious to avoid the mistake it made at the Talbot plant at Poissy, also near Paris, earlier this year. The union leadership then tacitly accepted 1,900 redundancies, only to find that

Warning over

one the majority required to autho-

This charge itself requires a two-

thirds majority among conference delegates and the indications yes-

terday were that this could be a

very close-run thing.

Previously unpublished area

breakdown figures of the Harris

poll also give substantial encou-

ragement to the NUM leaders. They show that support for a strike is well up on the levels of the last strike ballot in March last year.

Only one area - Nottinghamshire - has a majority - 46 per cent -

against a strike.

pit strikes Continued from Page 1

rise national strike action.

its rank and file was bitterly opposed to the compromise struck with the management and Gov-

The CGT is also likely to adopt a more militant line alter the success of the steelworkers' march on Friday. Although this will not bring any reversal of the steel restructuring plan, it has confirmed the CGT and the French Communist Party in their desired role of being seen as the main defenders of jobs. The Communist Party is taking an increasingly critical view of the economic policies of the Government

Debt rule may hit UK banks

Continued from Page 1 budget move to end capital allow

ances. Most other countries, including the U.S., allow their banks to in clude loss provisions in their capi-tal, so British banks could suffer a handicap, albeit a small one. The proposed ruling marks the latest twist in a long tussle between

banks and government authorities including the Inland Revenue, ove the treatment of provisions for less developed countries' loans. Much of the trouble is due to the fact that neighbouring Honduras and flown countries - unlike companies and by U.S. personnel over Salvadoran individuals - were never thought territory, are providing more pre-capable of going bankrupt and decise intelligence of guerrilla movecapable of going bankrupt and defaulting on their loans,

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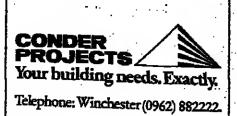
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SECTION II - COMPANIES AND MARKETS

FINANCIALTIMES

Monday April 16 1984



Dolla

prompts speculation on French return

BY PETER MONTAGNON, EUROMARKETS CORRESPONDENT

GAZ DE France is raising \$100m in the Eurocredit market in the first public operation by a French state since Credit National launched its £100m credit last No-

News of the credit on Friday immediately prompted market specu-lation that French state names might be poised to resume their borrowing in this market after a long period of concentrating mostly on international bonds. But the deal is very much a connoisseur's affair giving special advantages to the borrower that the floating rate note market cannot match

Led by Chase Manhattan and Societé Genérále it is a 12-year revolving standby credit that operates much like an overdraft. Gaz de France has total flexibility in drawing the funds instead of receiving the full amount in one lump sum which would have been the case for a floating rate note. Basic margins on funds drawn will be % per cent for the first ten years rising to 1/2 per cent over Eurocurrency rates thereafter, Repayments begin after a grace period of five years.

fee of % per cent, which is very low by current standards, but there will also be an additional % per cent retroactive commitment fee paid on funds drawn after a period of six months in which the credit has not been used. This is designed to discourage erratic use of the facility with the borrower constantly borrowing and repaying the loan.

A 12-year maturity on such a deal is rare in Europe, and this will give Gaz de France the chance to extend the profile of its foreign debt. One lesson for the market is that toprated borrowers with ready access to the FRN market now need a special reason for tapping the credit market instead. That is one reason. why so many current deals are

NEW ISSUE

Sumitomo Trust International

specialist operations with bells and whistles attached.

Still awaited is a large credit from Denmark. It wants to replace cheaply up to \$1.6bn in undrawn tments, but here again its reason for choosing the credit market is specific. It needs a stock of undrawn funds, but the FRN market only offers immediate cash.

Elsewhere the loan being arranged by Dresdner Bank, Lloyds Bank International and Credit Agricole for the Soviet Foreign Trade Bank is now to be increased to \$250m from an original \$150m. This is rather more than the original commitments of about \$200m and extra funds are being sought in the market. In Asia, Malaysia is sounding out banks for another large loan, possibly containing an ele-ment of sterling.

Banks will receive a commitment banks are to recommend that the payment of \$350m due today on last year's bridging loan be deferred for two more months. Apart from that last week's talks with Sr Bernardo Grinspun, the Economy Minister, made little progress. Much now hinges on Argentina's talks with the International Monetary Fund which seem likely to drag on be-yond the initial April 30 deadline.

Mexico's \$3.8bn credit is to be signed on April 27, while Venezuelan officials are to meet creditor banks shortly after Easter for a further round of rescheduling talks. A main item on the agenda will be the need for a further extension of the 90-day freeze on principal repayments which expires at the end of the month.

Connoisseur's credit NatWest floater well received

BY MARY ANN SIEGHART IN LONDON

ter Bank's bond-with-no-maturity, launched last Thursday got almost as rapturous a reception as ed by the % per cent spread over the the film of Superman, making the market wonder whether perpetual fered rate (Libor), which compared floaters 2 and 3 will soon be on their way from other borrowers.

Back in January, when floating per with fixed maturities. rate note euphoria was at its height. bankers claimed that the maturity as it was actively traded. Fifteenrear and then 20-year bonds were when Sweden's 40-year FRN met preferred stock.
with a lukewarm reception, the If a dividend is passed on its market became more sceptical. And

tious. Having been issued as a tributed. The deal has been rated \$200m deal - \$100m to be launched AA2 by Moody's and AA- by Staninitially and \$100m on tap - the initial tranche was doubled to \$200m within hours. Then on Friday, lead
manager County Bank raised the
So though it is slightly safer than
holding equity, it is probably riskier

"IS IT a bond? Is it a share? No, it's immediate portion to \$300m and the than many other FRNs. Yet the no-a perpetual floater? National West-tap to \$200m. Still the bond traded toriously risk-sensitive Eurobond well over par.

Investors were obviously attractsix-month London interbank ofwith a yield of around % per cent over Libor for comparable bank pa-

On the other hand, investors seemed not to worry about the staof a floater was immaterial as long tus of the offering. It is ranked as junior subordinated debt, which means that it comes after outstandlaunched very successfully, but ing deht but ranks above equity and

shares, NatWest can stop paying in-NatWest, which was then about to terest on the bond and it will not be launch its perpetual floater, held declared in default. However, all backdated interest must be repaid dard & Poor's. (Existing NatWest bonds have an AAA rating.)

investors either did not notice or

did not care. If they did not care, it was probably because they bad worked through the possible disasters and decided that the NatWest notes were no more risky than other bank paper. After all, if NatWest is in such dire straits that it has to pass a dividend, the chances are that the same world banking crisis will make the payment of interest on normal FRNs issued by other banks

just as doubtful. Dealers were still wondering on Friday why NatWest had so much better a reception than Sweden. One reason must have been timing - Sweden's bond was launched just as investors began to bave doubts about the durability of the FRN market.

Another factor may have been the name - though Sweden's bond is AAA and NatWest's is AA -bondholders may feel that a bank would have more incentive to look

after its own paper in the long run than a sovereign borrower. And finally, investors seem to be more attracted to a higher spread

over Libor than a discount on the price. (Sweden's issue bas been trading at a price of around 97.90.) Other borrowers may well be tempted to follow the NatWest route - it gives them what is effectively permanent share capital without having to dilute their equity and at a cost which, taking tax into account compares favourably with the dividend payout on the

However, they would have to be rated extremely highly for this type of debt to be palatable to investors. Other UK banks will probably have watched this issue with great interest, especially since the higher tax liabilities involved in the last budget will eat into their capital.
Other dollar bonds fared less well

last week. Holland Airlines Finance, for instance, launched a SI00m bond guaranteed by KLM on Friday which seemed tight in the Yields on Euro-currency Rates Sterling

morning when prices were rising and a lot tighter by the afternoon when the benchmark U.S. Treasury long bond dropped in price by a whole point on a larger than expected rise in U.S. industrial produc-

Holland Airlines is swapping the proceeds for floating rate money which it will then put on deposit for KLM. The resulting margin will not be reflected on KLM's balance sheet, so the transaction is rather like instantaneous defeasance.

have decoupled and despite the fact that sterling coupons are much lower, investor demand is still strong The D-Mark sector is being

sterling rates seem more or less to

dragged down both by the New York market and the weight of new issues. Japanese warrant deals are embarking on the same downwards price trend which they recently suffered in the dollar sector.

The Swiss franc market is in limbo, with investors sitting on the Much more popular last week sidelines. were starling bonds. Dollar and all week. sidelines. Prices were unchanged

<u> </u>						NEW INTERI	OITAN	NAL BOND ISSUES	3						
Becovers	Amount In.	Maturity	Av. life years	Coupon %	Price	Lead Masager	Ofter yield	Borrowers	Amount	Maturity	Av. life years	Coupon %	Price	Lead Manager	Offer yie
H.S. DOLLARS								SWISS FRANCS							
Aliastisto Co. 51	120	1999	15	3	108	Nomera Intl., Nikko Secs.,		NGK Spark Play Co. **\$‡	188	1989	_	13/4	100	SBC	1.75
		1000		•		Merrill Lynch, Daiwa Eur.	3,000	Tokyu Store Chain "\$1	188 30	1989	_	178	100	Swiss Volkshank	1.87
Opeda Coment Co. 71	30	1989	5	71/2	188	Nikko Secs., Robt. Fleming, IBJ In		Mitsui Construction **§1	50	1988	_	21/2	100	Cipicorp Bk. (Switz)	2,12
EBS I	108	1894	10	1274	991/2	Deutsche Bank, BNP, SBCI	12.957	Taxerrikreftwerke 1	108	1994	_	51/2	993/4	SBC	5.53
EB I	108	1880	6	121/2	991/2	As above.	12,624	Tobu Rahway Co. 91	100	1992	_	4	100	SEC	4.90
Sundtomo Fin. ‡	150	1951	7	123/4	100	Salomon Bros., CCF, CSFB,	12,024	Seibu Restaurent ** 51	50	1589	_	17/2	100	UBS	1.87
			•	12.74	,	Sunitomo Fin.	12.758	Canada *'1	300	1987	_	47/	100	SBC	4.87
Micsobishi Corpe. ‡	198	1091	7	121/2	100	Merrill Lynch, Nikko Secs.	12.790	Canada ***	209	1990	_	51/8	100	SBC	5.12
		,,,,		14.74	140	Mitsubishi Fir.	12,500	Mount (sa Fin.	100	1994	_	27.	100	889	5.75
Interfirst Bank †(b) ‡	108	1089	5	Va	100	Goldman Sacks, Merritt Lynch.	12.000	Takvo Steel **5	30	1989	_	17/4	100	UBS	5.73
Bangkok Bank 1221	50	1994	10	Vs	108	CSFB Micsui Fin. Asia, Chase Mar	- metters	NTN Toyo Bearing **\$	100	1989	_	17/2	100	SBC	
Het. West Bank †(c)‡	500			3/4	160	Asia County Bank	- martan	Taubakimoto Saiks 5	40	1989	Ξ	2	100	UBS	
Holland Airlines Fig. 11	188	1991	7	1214	100	Orion Royal Bank	12.250	Furnicava Electric **§	100	1989	_	17a	180	SOC	
Japan Synthetic Rubber T	30	1989	Ś	73/4	*	Yamaichi letti, IBJ latt., OHF-Bank		Toskiba S	106	1992		27/2	108	CS	
Feillage Ltd. 7	38	1989	Š	73/4		Nonurs Ind.		Tostaba **§	100	1985	_	17/4	100	CS	
Sumitorno Corpo, §	50	1999	15	372	100	Daiwa Eur., Schroder Wagg,		Suminomo Realty ** 5	85	1989	_	2	100		
	-	1300	1.5	•	100	Sumitumo Fin.		Witsuhishi Mining	30	19898	- i	53/4	100	CS CS	
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D-MARKS								Prov. of Nova Scotia 1	60	2015	35	113/4	99.887	SG Warburg	40.04
C. Itah Fael 91			_			_		New Zealand 1	190	1989	23	105/4	991/2	SG Warburg	12.01
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Hyder-Cuntec 1	80	1990	6	3	108	West IB			150	1989		81/4	100	ABN	8.25
	190	1985	3	7V2	100	West LB	7.500	YEN							
Hydro-Osebec ‡	100	1994	10.	73/4	991/2	West LB	7.824	Asian Devt. Bank ‡	25bn	1996	10.32	7.3	99.70	Nicco Secs.	7.47
Sweden ‡	250	1994	10	71/2	108	Deutsche Bank	7.075	OKB ‡	20bn	1994	9	7.3	99.55	Noroura Secs.	7.50
Mount Ise Fin. ‡	186	1592	8	71/4	100	Commerzhank	7.750	World Bank	20ba	1994	10	7	991/2	Nikko Secs.	

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March, 1984

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April, 1984

Minor rally fails as uncertainty on economy returns

the wake of the Federal a possible surge in money Reserve Boards half point dis-supply numbers in the next few count rate increase, slight weeks signs of a slowdown in the At the close on Friday the Treasury long bond was quoted at 95% down more than 1% markets of their concerns about points on the dey and % points inflation. on the week. At that price the Treasury long bond is yielding 12.59 per cent compared to 12.59 per cent compared to 12.51 per cent a week ago. In the money markets Fed funds traded irregularly lower but by the close T-bill rates were

U.B. INTEREST RATES (%) Fed funds weekly average 10-13 10-41 10-40 10-37 10-40 10-37 10-40 10-41 10-40 10-41 10-40 In the week ending April 1 M1 tell by \$5bn to \$533.2bn. In Merch M2 rose by \$6.5bn to \$2,228.4bn end M3 rose by \$19.2bn to \$2,762.4bn.

bigher with the 6-month rate The high volatility of market rates and bond prices reflects renewed uncertainty ebout how to interpret the latest batch of U.S. economic statistics, the money supply end banking figures, and the Fed's current monetary stacce.

The market remains extremely jittery end this was amply reflected in trading last week. The Fed's discount rate move initially steedied the msr-ket's nerves and set an im-

However the rally was short-

ONCE AGAIN the U.S. credit lived. Analysts pointed out that markets are in a state of flux. Significant technical factors may Last week saw a minor rally in be at work which point towards

oeady pace of economic expansion, and an unexpectedly large larger than expected 0.4 per soon decline in M1—only to lose all the gains on Friday.

At the close on Friday duction in March and a 0.5 and a control of the close on Friday. duction in March and a 0.5 per cent increase in producer prices which served to remind the

inflation. There is now no clear con sensus on what the Fed will do next but a majority of Wall Street economists believe the Fed is prepared to let the mar-ket push rates higher and will -if necessary- raise the dis-count rate again.

With private credit demand soaring—total outstanding comsoaring—total outstanding com-merciel peper increased to \$17.4bn in the first quarter com-pared to just \$3.7bn e year ago—and still only limited signs of progress on the budget deficit, it is now respectable to talk of higher short-term rates by the year-end—as Martin Fieldstein, chairman of the President's Council of Economic Advisers, did last week. did last week.

The markets will be treated to another bumper round of March economic statistics this week beginning with cepacity week beginning with cepacity utilisation today, housing starts tomorrow and the preliminary first quarter GNP figures on Thursday—the last trading dey aheed of the extended Easter bolidey weekend.

In the corporate markets the Rule 415 shelf registration list continues to grow and currently

cootinues to grow and currently totals around \$36bn. Last week the corporate markets followed the government sector with bond prices firming moderately initially only to be slepped back down on Friday.

ket's nerves and set an improved tone to early trading—an improvement which was reinforced oubstantially by indicetions that the pace of the U.S. economic expansion may be slowing at last.

The improvement picked up steam on Thursday spurred by a 2.2 per cent decline in March retail sales and a set of money. office to represent the two main operating banks of the group in operating banks of the group in australia. Mr David Bell will be the Bank of Scotland and williams and Glyn's joint representative, based in Sydney. New South Wales. Mr Bell joined The Royal Bank in January 1972. For the past year, be has been involved in assessing and controlling lending in foreign currencles set up by the bank's offices both in the UK and overseas. retail sales and a set of money Chemicels sold \$100m of 10-year supply numbers which left all the aggregates comfortably within target and M1 well towards the bottom of the Fed's extendable notes.

Dome Petroleum suffers record loss of C\$1.1bn

GM seeks rise

GENERAL MOTORS, the big-gest U.S. carmaker, is to seek

sbareholder approval for e rise in the number of its authorised

common shares to 1bn from 500m along with enthorisation

for a new class of 100m pre-ference share.

GM said the increase in authorised shares would en-

hance the company's position in

future actions such as stock dividends, splits, mergers,

dividends, splits, mergers, acquisitions of property and possible funding of new pro-

duct programs or businesses. At December 31, 1983, the company bed 315.7m shares outstanding.

Senior post at

ROYAL BANK OF SCOT-LAND GROUP has received ap-proval from the Australian

Treasury to establish a joint office to represent the two main

Royal Bank

of Scotland

in share base

By Our Financial Staff

DOME PETROLEUM, the debtridden Canadian energy and natural resources group, suffered a loss of C\$1.105m businesses are fundamentally canadia.

(U.S.\$855m) or C\$4.72 per common share in 1983, the biggest loss ever reported by a Canadian company. The previous year's loss was C\$369.3m.

The 1983 losses were largely due to previously announced write-downs of C\$96.9m and the cost of disposing of assets, estimated at C\$76.6m Excluding a planned injection of new seriar. Dome said that the previous loss would have been C\$131.5m, up from certain income and contract drilling and contract drillin

BY JONATHAN CARR IN FRANKFURT

parent as a dividend.

Overall turnover, both from operations in Germany and sales to IBM sister companies abroad, rose 15.2 per cent to DM 10.50n and a similar growth rate is expected this year.

Domestic turnover was up
14.4 per cent to DM 6.4bn —

thanks mainly to the growing DM 6.6bn.

Dr Juerg Freiz has been promoted to general manager of MAGAZINE ZUM GLOBUS, Zurich-based parent company of the Globus and ABM department-store chains, Mr Georg Wyss

Dr Robert Karrer has

succeeded Dr Max Steiner as vice-chairman of BANK JULIUS

BAER, Zurich, Mr Alfred N. Schindler, director of Schindlar Holding, has joined the board to replace Dr Steiner, who has retired.

• Joseph F. Prevratil has been promoted to president of WRATHER PORT PROPERTIES, operators of the Queen Mary and

Spruce Goose attractions as well as the Hotel Queen Mary and Londontowna Village in Long Beach. He foined Wrather Port Properties in 1982 as vice presi-

dent, operations, and has served

MARCH 1984

es a manager,

these factors Dome's loss would capital. Doma said that it with several dozen banks to rehave been C\$131.5m, up from intends expanding the development of heavy and bituminous progress. The negotiations were due to be completed two weeks view that its problems are expected impact of declines in

Advance in net earnings for IBM Deutschland

cern, raised net profits in 1983 to DM 681m (\$260m) from DM 646m in the previous year, and is paying DM 420m to the

IBM DEUTSCHLAND, the trend by customers to buy their West German subsidiary of the machines rather than rent them. world's biggest computer con-While domestic sales rose 38 per cent to DM 3.3hn and turnover from services (including maintenance) was up 13 per cent to DM 16bn, revenue from leasing fell 17 per cent to DM 1.4bn.

> IBM Deutschland, which employs about 27,000 people in th West Germany and Berlin, spent
> DM 1.3hn last year on fixed
> up asset investment, bringing the
> total for the last five years to

Investment income lifts Zurich Insurance

By John Wicks in Zurich

ZURICH INSURANCE, the big Swiss insurance group, lifted 1983 net profits from SwFr 90.2m to SwFr 101.4m (\$46.7m), as a result of higher investment income and a reduction of write-offs on investments. A substantial increase in incurred losses led to a deterioration in the company's under-

The company is to propose an unchanged dividend for 1983 of SwFr 240 a share and SwFr 24 per participation certificate, and transfers to reserves are in-creased to SwFr 39.6m from SwFr 31.1m in 1982.

writing results, although there was a cut in the expense ratio.

Gross premium income of the parent company went up 4.2 per cent to more than SwFr 3.860n. Had exchange rates remained unaltered. The rise would have been 5.3 per cent. The entire Zurich group booked a 6.5 per cent improvement in gross premium income ment in gross premium income to SWFr 8.34bn.

Wagons-Lits of Belgium and Nestla of Switzerland are to dissolve their partnership in Eurest, the French based contract catering group, reports Paul Cheeseright.

Nestle has agreed in principle to sell its 50 per cent share to Wagon-Lits, which had an option on the purchase in an agree-ment aigned by the two groups in 1973. No price has been settled. That will depend on the valuation of a dozen companies and their subsidiaries.

NTT plans \$7.6bn spending programme

NIPPON TELEPHONE and half of NTT's equity, that is Telegraph, the Japanese govern- Y500hn, will be offered for sale ment-owned telephone company, to the public with some two-has amounced a Y1,710bn thirds of the shares due to be (\$7.6bn) investment pro sold off within five years, gramme for the year which At the end of January, Japan started on April I.

and the U.S. signed a three

The main elements in the pro- year agreement which should gramme are an expansion of the allow American companies e number of digital switchboards bigger share of the Japanese—another 80 are to be intro-telecommunications market duced compared with only 27 Last week NTT broke with its in 1983-84—plus the extension "buy Japanese" policy to purin 1983-84 — plus the extension . "buy Japanese" policy to pur-of the optical fibre cable link chase computer-controlled busi-to connect Sapporo in the north ness communications systems of the country with Fukuoka in from the California-based Rolm

NTT also plans to expand the

the south.

NTT also plans to expand the fascimile services to 262 cities.

Earlier this year the to Y30,000hm scheme to convert Japanese Government announced plans to privatise NTT work from an analogue to a digitary from April 1985. According to a compromise agreement becompleted by the end of this tween the ministries involved

company.

Adsteam unit sells food assets

ducer.

The agreement entlined in the federal court here follows moves by the Trade Practises Commission (TPC) to block the Petersville purchase. The purchase, for about A\$50m, would have given Petersville around 90 m 95 per cent of the Australian frozen

MELBOURNE — Petersville food market—hence the objections of the TPC.
Adelaide Steamship (Adsteam), has agreed to sell some of the is a significant success for the frozen food assets recently acquired from Elders IM. to of its kind in Australian his McCaim Australia — the local moit of the Canadian food producer.

The Commission started its action three months ago following the Petersville purchase of the Elders frozen food chase of the Elders frozen food unit, General Jones.

"Under the agreement McCain will acquire General Jones' frozen vegetable processing plant in Northern Tasmania and the major General Jones brand names, Copper Kettle and Pict.

INTERNATIONAL APPOINTMENTS



Mr Joseph F. Prevratil, presi-Wrather

or wrainer corp.

Mr Roland G. Ward has been appointed BANK OF AMERICA country manager for Switzerland. He was previously executive assistant to Mr Samuel Amacost, president of Bank of America. Mr Hugh Russell has been appointed manager of Bank of America's new branch in Geneva. Ha was formerly senior credit and marketing officer at the bank's Paris branch. the bank's Paris branch.

ANCE COMPANY and OPTI
CRECUIVE officer of EUROPEAN
MUM HOLDING CORPORA- AMERICAN BANCORP and its
TION have jointly appointed major subsidiaries. European
Mr B Frederick Becker as president and chief executive officer of both companies. He has companies. He has served as vice president and president and chief executive secretary of both companies officer of Fidelcor, Inc and its dant and chief executive officer of both companies. He has served as vice president and secretary of both companies.

as vice president/general manager for the past year. Wrathar Port Properties is a subsidiary of Wrather Corp.

Mr Roland G. Ward has been appointed BANK OF AMERICA country manager for Switzerland. He was previously executive assistant to Mr Samuel

Mr Becker succeeds Mr Edward major subsidiary, Fidelity Bank P. Lalley, president and chair in Philadelphia. He succeeds Mr Mary E. Ekblom, who left EAB at the end of 1983.

Mr Boland G. Ward has been appointed as chair man until the annual meeting HARBOR INSURANCE COMmany Mr John E. Quinn PANY as vice president and has been appointed vice chair southern regional manager, man of Ideal Mutual Insurance covering 12 southern states. He company He also approx as were a soulor vice president with

● IDEAL MUTUAL INSUR- been elected chairman and chief

man of Ideal Mutual Insurance covering 12 southern states. He Company. He also serves as executive vice president of both companies. Mr Fred L Packer who served as an executive vice president of the companies has resigned.

Mr Raymand J. Dempsey has been elected chairman and chief executive officer of European American Bank and Trust Co and Mr Charles P. Nastro. executive vice president and director of commodity administration. Shearson/American Bank and Trust Co and Mr Charles P. American Express, Inc. have been elected members of the president and chief executive officer of Fidelcor, Inc and its EXCHANGE.

NEW ISSUE

These Notes having been sold, this announcement appears as a matter of record only.

U.S. \$100,000,000

Arab Banking Corporation (B.S.C.) (Incorporated with limited liability in the State of Bahrain)



Floating Rate Notes Due 1996

Credit Suisse First Boston Limited Algemene Bank Nederland N.V. **Bankers Trust International Limited**

Crédit Lyonnais

Commerzbank Aktiengesellschaft

Gulf International Bank B.S.C.

Yamaichi International (Europe)

Arab Banking Corporation (B.S.C.) Bank of Tokyo International Limited

> Citicorp Capital Markets Group **County Bank Limited**

Genossenschaftliche Zentralbank AG - Vienna Kidder, Peabody International Limited

Kuwait Foreign Trading Contracting & Investment Co. (S.A.K.)

Lehman Brothers Kuhn Loeb LTCB International Limited Samuel Montagu & Co. Limited National Bank of Abu Dhabi

Saudi International Bank Al-Bank Al-Saudi Al-Alami Limited Takugin International (Asia) Limited

Libyan Arab Foreign Bank Manufacturers Hanover Limited Morgan Stanley International

The National Bank of Kuwait S.A.K. Sumitomo Finance International Union Bank of Switzerland (Securities) Limited

Al Bahrain Arab African Bank Al-Mal Group Amro International Arab African International Bank **Arab International Bank** The Arab Investment Company Bahrain Middle East Bank (E.C.) Bank of Yokohama (Europe) S.A. Banque Bruxelles Lambert S.A. Banque Nationale de Paris Baring Brothers & Co., Burgan Bank SAK Chase Manhattan Capital Markets Group Chemical Bank International Group Dai-Ichi Kangyo International Daiwa Europe First Chicago Fuji International Fluance Goldman Sachs International Corp. Girozentrale und Bank der österreichischen Sparkassen Galf Bank KSC Gulf Riyad Bank EC IBJ International Kleinwort, Benson London & Continental Bankers Kyowa Bank Nederland NV Lloyds Bank International Mitsubishi Finance International Mitsubishi Trust & Banking Corporation (Europe) S.A. Morgan Grenfell & Co.

The Nikko Securities Co., (Europe) Ltd. Nomura International Orion Royal Bank Saitama Bank (Europe) S.A. Sanwa Bank (Underwriters) Société Générale Sumitomo Trust International Swiss Bank Corporation International The Taiyo Kobe Bank (Luxembourg) S.A. Tokai International Westdeutsche Landesbank

Jest in Isla

FT INTERNATIONAL BOND SERVICE

DEUTECHE MARK

STRAIGHTS

Asian Dev. Bent, 8 84.

Asian Dev. Bent, 8 84.

Authriff Comm. 5°, 98

Authriff Comm. 5°, 98

Authriff Comm. 5°, 98

Coffroute 7 54

Elec. Fower Dev. 5°, 54

Inited 6°, 58

Inited Ampublic 5°, 94

Inited 6°, 58

Inited 6

FLOATING RATE

EUROBOND TURNOVER (nominal value in \$m)

Cedel ciear Last week ... 7.706.1 12,031.2 Previous week 6,448.5 13,968.2

Last week ... 2,311.9 1,928.9 Previous week. 1,792.6 2,115.3

 No information available previous day's price. † Only one market maker supplied a price.

STRAIGHT BONDS: The yield is the yield to redemption of the mid-orice; the amount issued is in millions of currency units except for Yeo bands where it is in billions. Change on week=

FLOATING RATE NOTES: Denominated in dollars unless otherwise indicated. Coupon shown is minimum. Cdte=Date next coupon becomes effective.
Spread=Margin Boove six-month
offered rate (t three-month;
gabove mean rate) for U.S.
dollars. C.cpn = The current
coupon: C.yid = The current

yield.

CONVERTIBLE BONDS: Denominated in dollars unless otherwise indicated. Chg day=
Change on day: Chy date=First date for conversion into shares.
Chy price=Nominal amount of bond per share expressed in currency of share et conversion rate fixed at issue. Prem=Percentage premium of the current effective price of acquiring shares via the bond over the most recent price of the shares.

The list shows the 200 latest international bonds for which an adequate secondary market exists. The prices over the past week were supplied by: Kredist-bank NV; Credit Commercial de France; Credit Lydinais; Commerciank AG; Deutsche Bank AG; Westdeutsche Tandesbank Girozentrale; Banque Generale de Lorenbourg SA; Banque Girozentrale; Banque Generale du Luxembourg SA; Banque Internationale Luxembourg; Krodietbank Luxembourg; Algemene Bank Nederland NV; Plarson, Heldring and Pierson; Credit Solese/Swies Credit Bank, Union Bank of Switzerland; Aktord and Smithers; Bank of Tokyo International; Blyth, Essiman, Paine, Wabban International Corporation: Hambres Bank; Bal International; Kidder Peabody International; Mervill Lynch; Morgan Stanley International; Orion Royal Bank; Robert Fleming and Go.; Samuel Montagu and Co.; Scandinavian Bank; Societe Generale Strange International;

Sumitomo Finance International: S. G. Warburg and Co., Swiss Bank Corporation International;

Closing prices on April 13

March 1984

British V Caledonian

U.S.\$107,000,000

TERM CREDIT FACILITY

For Two Airbus Industrie A 310-200 Aircraft

Arranged by

BANK OF AMERICA INTERNATIONAL LIMITED

NATIONAL WESTMINSTER BANK GROUP

Provided by

Bank of America NT&SA

Bankers Trust Company, London Branch

Banque Nationale de Paris Group

Citibank N.A.

The First National Bank of Chicago

International Westminster Bank PLC Security Pacific National Bank Algemene Bank Nederland N.V., London Branch

Airways

APV HOLDINGS

	1983	1982
Turnover	£374m	£339m
Profit before tax	£18.3m	£17.6m
Earnings per share: basic	34.1p	34.4p
diluted	32.0p	30.6p
Ordinary dividends	11.25p	10.5p

Analysis of turnover

Africa £37m 10% Asia Pacific UK £94m £61mContinental North and Europe South America

Extracts from the statement by the Chairman, Sir Ronald McIntosh KCB

Although there was no marked improvement in the demand for capital equipment, we achieved a 1982. We entered 1984 with an order book only modest increase in turnover and pre-tax profit in

The dividend has been increased for the seventeenth successive year. Our balance sheet has again strengthened; shareholders' funds have increased by £10 million to £114 million and the debt-equity ratio has been reduced to 10 per cent.

We continue to give the highest priority to the development of our technology and to foster innovation throughout the group.

Orders received in 1983 were 11 per cent up on slightly higher than 12 months previously but the prospects for growth in the major economies of the world seem to be improving and this should bring an increase in the demand for capital goods.

Several of our companies in Europe, the USA and elsewhere produced good results in 1983 and we expect most of them to do well again this year. So far as group profits for 1984 are concerned, much will clearly depend on the strength of the hoped-for recovery in demand for capital goods.

APV — market leaders in advanced process plant for the food, beverage and chemical industries.



APV HOLDINGS PLC

APV House, Crawley, West Sussex RH10 1HH.

The AGM will be held on Tuesday 22 May 1984 at APV House, Crawley.

Copies of the Report and Accounts will be available after Monday 30 April 1984 from the Secretary.

Bank of America



£114m

£68m



NEW ZEALAND

DM 250,000,000 71/4% Deutsche Mark Bearer Bonds of 1984/1991

Issue Price: 100% - Interest: 71/4% p.a., payable annually in arrears on April 14 - Redemption: on April 14, 1991 at par - Denomination: DM 1,000 and DM 10,000 · Security: Negative Pledge Clause · Listing: Frankfurt/Main

COMMERZBANK

S. G. WARBURG & CO. LTD.

AMRO INTERNATIONAL LIMITED

CREDIT LYONNAIS

DEUTSCHE BANK

KIDDER, PEABODY INTERNATIONAL

Lehman Brothers Kuhn Loeb

International, Inc. Lloyds Bank Internation LTCB International Limited

M. M. WARBURG-BRINCKMANN, WIRTZ & CO.

Crédit Industriel et Commercial

Credito Italiano
Credit Suisse First Boston Limited
Daiwa Europe Limited
Delbrück & Co.

Abu Dhabi Investment Company Algemene Bank Nederland N.V. Arab Banking Corporation (ABC) Julius Baer International Limited Banca del Gottardo Banca della Svizzora Italiana. Banca Nazionale del Lavoro Banco di Roma per la Svizzera S.A. Banco Urquijo Hispano Americano Limited BankAmerica Investment Banking Group Bank für Gemeinwirtschaft

Aktiengesellschaft Bank Leu International Ltd. Bank Mees & Hope NV Bank of New Zealand Banque Bruxelles Lambert S.A. Banque Française du Commerci Banque Indosuez Banque Internationale à Luxembourg S.A. Banque Nationale de Paris Banque Paribas Banque de Paris et des Pays-Bas (Suisse) S.A. Banque Populaire Suisse S.A. Luxembourg Banque Privée S.A. Banque de l'Union Européenne Baring Brothers & Co., Limited n- und Wechsel-Bank

Bayerische Hypotheke Aktiengesellschaft Bayerische Landesbank Girozentrale Bayerische Vereinsbank Aktiengesellschaft Joh. Berenberg, Gossler & Co. Berliner Bank Aktiengesellschaft Berliner Handels- und Frankfurter Bank Bankhaus Gebrüder Bethmann Blyth Eastman Paine Webber International Limited Caisse des Dépôts et Consignations Chase Manhattan Capital Markets Group Chemical Bank International Limited Citicorp Capital Markets Group Commerzbank International S.A. CIBC Limited Commerzbank (South East Asia) Ltd. Copenhagen Handelsbank A/S County Bank Limited

Crédit Commercial de France

Den Danske Bank af 1871 Aktieselskab Den norske Creditbank Deutsche Girozentrale Dillon, Read Overseas Corporation Dominion Securities Ames Limited Dresdner Bank Aktiengesellschaft Aktiengesellschaft nskilda Securities Skandinaviska Enskilda Limited **EuroPartners Securities Corporation** in Banking Company L'Européenne de Banque Girozentrale und Bank der österreichischen Sparkassen Aktiengesellschaft Goldman Sachs International Corp. ent des Banquiers Privés Hamburgische Landesbank Georg Hauck & Sohn Bankiers Kommanditgesellschaft auf Aktien Hessische Landesbank – Girozentrale Hill Samuel & Co. Limited Industriebank von Japan (Deutschland) Aktiengesellschaft ansallis-Osake-Pankki Kleinwort, Benson Limited Kredietbank N.V. Kredietbank S.A. Luxembourgeoise Kuwait Foreign Trading Contracting &

investment Co. (S.A.K.)

Landesbank Rheinland-Pfalz

- Girozentrale -Lazard Brothers & Co. Limited Lazard Frères et Cie

Kuwait International Investment Co. s.a.k.

Kuwait Investment Company (S.A.K.)

Merck, Finck & Co. Merrill Lynch Capital Markets B. Metzler seel, Sohn & Co. Samuel Montagu & Co. Limited Morgan Grenfell & Co. Limited Morgan Greenett & Co. Limited Morgan Stanley International The National Bank of New Zealand Ltd. Nederlandsche Middenstandsbank N.V. The Nikko Securities Co., (Europe) Ltd. tura International Limi Norddeutsche Landesbank Sal. Oppenheim ir. & Cie. Orion Royal Bank Limited Pierson, Heldring & Pierson N.V. PK Christiania Bank (UK) Limited Renout International (NZ) Limited N.M. Rothschild & Sons Limited omon Brothers International Limited J. Henry Schroder Wagg & Co. Limited Scrimgeour, Kemp-Gee & Co. Smith Barney, Harris Upham & Co. Société Générale Société Générale de Banque S.A. Svenska Handelsbanken Group Swiss Bank Corporation International Trinkaus & Burkhardt Union Bank of Finland Ltd. Union Bank of Switzerland (Securities) Verband Schweizerischer Kantonalbanken Vereins- und Westbank Aktiengesellschaft J. Vontobel & Co. Wardley Westdeut

Westfalenbank Aktiengesellschaft Wood Gundy Limited



All of these Notes having been sold, this announcement appears as a matter of record only.

BARCLAYS OVERSEAS INVESTMENT COMPANY B.V.

(Incorporated with limited liability in the Netherlands)

U.S. \$350,000,000 **Guaranteed Floating Rate Notes due 2004**

Guaranteed on a subordinated basis by

BARCLAYS BANK INTERNATIONAL LIMITED

(Incorporated with limited liability in England)

Barclays Merchant Bank Limited

Lehman Brothers Kuhn Loeb International, Inc.

S. G. Warburg & Co. Ltd.

Algemene Bank Nederland N.V.

Banque Bruxelles Lambert S.A.

Banque Internationale à Luxembourg S.A.

Banque Nationale de Paris

Credit Suisse First Boston Limited

Dresdner Bank Aktiengesellschaft

Goldman Sachs International Corp.

Morgan Grenfell & Co. Limited

Salomon Brothers International

Sumitomo Finance International

Swiss Bank Corporation International Union Bank of Switzerland (Securities)

2nd March, 1984

UK COMPANY NEWS

Markheath **Securities** tops £2m

A PROFIT increase from £1.83m to £2.07m for 1983 is reported by Markheath Securities, the commercial and residential property developer. The final dividend is the forecast 5.2p for a net total

Mr Paul Bobroff, chairman. says three office developments

were sold.

Mr Bobroff says the higher level of business activity geoerally is resulting in increased tenant interest in all the group's developments. The directors are confident that, provided the resulting sales take place this year, turnover and profit in 1984 will again be a record.

Turnover in 1983 advanced from £9.22m to £12.47m. After tax £776,000 (£162,0001 and extraordinary debits £155,000 (£60,000), the available profit is £1.14m (£1.61m).

Mr Bobroff and Mr G. A. Springer have waived (except for 0.01p per share) their respec-

for 0.01p per share) their respec-tive entitlements to doy divi-dend for 1983

n recent years, Japan has

consistently out-performed

countries in terms of economic

And the outlook for con-

continues to be attractive for

investors: Inflation is minimal,

the currency is steady, political

and the nation remains in the

and social stability prevails,

forefront of technological

advancements required for

competitiveness on a global

Moreover, the scope for

is quite broad in view of the

highly liquid and extensive

equity and bond markets. The

stock market, for example, has

a capitalization equivalent of

second in size only to that of

some U.S. S 470 billion.

rewarding investments in Japan

scale.

12

internationally diversified

tinued healthy growth in Japan-

all other major industrial

Arrow Chemical well up after strong second half

improve significantly for Arrow Chemical Holdings in 1983, but it pushed up its turnover from 16.36m to £7.3m and its profit before tax from £360,000 to £516,000. The final dividand is the promised 1.1p on capital in-creased by the rights issue, for a rotal of 1.6p, against 1p.

ASSESSES THE YEN FOR

the U.S., and on a par with that

of all major European markets

Multicurrency investors

seeking high total returns

should therefore seriously

examine the advantages of

including a meaningful pro-

portion of ven-denominated

instruments in their currency

mix. Either in equities and/or

from the above-average growth

of the Japanese economy. Or in

yen bonds which provide both

acceptable yields and potential

currency gains. Or in both

Naturally, to achieve

maximum benefit from any

thorough understanding of

specific markets are essential.

For expert advice, consider the

credentials of The Julius Baer

investment, good timing and a

equities and bonds.

convertible bonds to profit

combined.

INTERNATIONAL INVESTO

HOW A LEADING SWISS BANK

BOARD MEETINGS

The following compasies have notified dates of board meetings to the Stock Exchange. Ouch meetings are usually held for the purpose of considering dividende. Official indications are not available as to whather the dividends are interior; or finals and the subdivisions shown below are based mainly on last year's timatable.

FUTURE DATES

Interime:

New Australia Investment Trust Apr 24
Stawart Naim Apr 25
Finals:

Finals:

Bardsey Apr 18
Ellia and Goldstein Apr 25
Hay (Narman) Apr 26
Hookins and Horton May 1
Marshall's Universal Apr 25
Mora Il'Ferrall May 8
Raberts, Adlard May 1
Savs end Prosper Linked Investment Trust May 3 creased by the rights issue, for a total of 1.6p, against 1p.

Profit in the second half rose considerably, the directors report, resulting in the balance after tax, but before extraordinary items, increasing by 129 per cent over 1982.

In respect of the current year, the directors state that results to date indicate that the objective of increased profits "as likely to be achieved."

Export volumes increased by 14 per cent over 1982, the major rises being attributable to the growing markets in Sweden, Finland and Iceland.

New products have been deviced a total control of the current year of the year of the current year of the current ye

Plantation & Gen. seeks full listing

ments, the shares of which, are presently traded under Rule 163(2), is moving up to a full listing by way of an introduction, arranged by Sheppards and Chase.

the UK, it has sufficient trading profits to be eligible for a full quotation.

Telfos which has a separate Stock Exchange listing is a Birmingham based metal spraying flow business and manufacturer of brass and bronze strip, bronze rods and zinc wire. After substantial reorganisation the company has been turned round from losses of \$438,000 in 1981 to pre-

Plantation & General Investnents, the shares of which, are
presently traded under Rule
production is expected by about
1995. The company also has a
disting by way of an introduction, arranged by Sheppards and the quoted plantation company
Anglo-Indonesia, which will be
treated as an associated company Chase.

The company used to be mainly an investment company, but with the acquisition of a imajority stake in Telfos, an engineering business based in the UK, it has sufficient trading indonesia, which will be treated as an associated company in the current year of accounts.

Mr Konrad Legg, chairman of Plantation and General is also engineering business based in managing director of Anglo-Indonesia.

In the Year to December 1983, Planation and General made pre-tax profits of £757,000, up from £602,000, on turnover ahead from £1.72m to £3.41m. The final net dividend of 2.5p makes a total of 4p for the year—an increase of

losses of £438,000 in 1981 to pre-tax profits of £341,000 in 1983.

The principal business of the company is still in plantations.

It owns Nchima, a tea planta-tion in Malawi, and has a 25 per treated.

Chemical Methods in loss

LOSSES were incurred by compared with \$9.04m in 1982, Chemical Methods Associates in when profits of \$956,000 were the second half of calcular 1983 achieved.

Chemical Methods, a U.S.-based manufacturer of dishwashers, had turnover of \$9.76m

the second half of calendar 1983 resulting in an overall full-year taxable deficit of \$144,000 another event during the year (£101,000).

This concludes an eventful return technique, the company year in which the company joined the USM last May forecasting an ensural profit of \$4m only to request a temporary the surface of the company offered holders their money back over those declining the option, those declining the option, those declining the option of a return of 10 per cent on their investment this year and next.

casting an ensural profit of \$4m only to request a temporary suspension of dealings five months later saying the forecast would not be met.

A week after the suspension request, the directors revealed that profits of only \$139,700 had been achieved in the interim period and warned that the situation had not improved in the third quarter.

In the event, losses of \$284,000 were suffered in the final half system for on-premise launchies of \$227,000.

The directors hope that these of \$227,000.

The directors hope that these changes will stimulate sales and contribute to Chemical's future operating results.

COMPANY NEWS IN BRIEF

A SUBSTANTIAL fall in exports, plus the cost of ending its maxine diesel engine production, is likely to push Associated British Engineering into loss for the first time since 1975.

Mer A. Ross Belich, chairman, says progress by the company, which is involved in distribution, electrical engineering and diesel power, has not been maintained during the second half.

In the opening six months to September 30, pre-tax profits were shead on the comparable period for the distribution and electrical sectors, but engineering was down, taking the total figure to £719,000 against £724,000.

Mer Belch says management

Mr Belch says management accounts indicate a small loss for the whole year and there might also have to be some significant extraordinary provisions.

However, the board is expecting a return to profit during the current financial year.

An almost doubled loss of £482,387 against £250,655 is reported by E. Upton and Sons, Middlesbrough-based department store operator, on turnover down at £5.7m, against £6.1m, for the 53 weeks to January 31 1984. The loss comes after charging £105,907 (nill), being the cost of refinancing customer credit arrangements and the closure of head office.

(£125,000) and there was extraordinary credit of £9,780 from selling freebold property. The attributable loss has been struck at £447,807 (£125,655). No dividend is recommended. *

Along with higher tarable profits of £2.94m, against £920,000, an initial dividend of Ip net is being paid by Goal Petroleum, 8 gas and oil explorer and producer.
....Turnover for the 1983 year wa

higher at \$6.18m (£5.48m) and operating profits rose to £2.84m (£1.14m); to which interest credits added £102,000 (debts £219,000).

Tax took £728,000 (£358,000). extraordinary credit; totalled £31,000 last time. Earnings per 5p share were 6.6p (1.85p).

Two companies, Zinetty Pre-perties and South Herts Shop-string, were compulsorily wound up in the High Court.

The following securities have been added to the FT Share Information Service.

Asian Development Bank 104pc Loan 2009 (Section: International Bank and Overseas Government Storikos Issues S. Sterling Issues). Echo Bay Mines (Mines—Mis-

Hambros Investment Trust Tax credits contributed £25,000 Warrants (Investment Trusts).

ANZ

Autor

Metropolitan ... May 16 Interim 3.875

STATEMENT ISSUED BY THE ASSOCIATION OF MANAGEMENT & PROFESSIONAL STAFFS ON BEHALF OF ICI MANAGERS

NOTICE TO ICI SHAREHOLDERS

1Cl's management and professional staff decided in a ballot to 1976 (81% of a 90% poil) that their salaries should be determined by negotiations between the Company and the Association. The managers considered that strike action would be inappropriate their loyalty to the Company and Insisted that the agreement signed with the Company provided for arbitration and mediation in the event of any issue not being resolved by negotiation.

in 1979 the Company and the Association failed to agree and the issue went to mediation. The mediator recommended in the Company's favour and this was accepted by both parties.

In 1983 negotiations also led to mediation and the ACAS mediator. Sir John Crossley Wood, recommended in the favour of the Association. The Company refused to implement the award.

On the 31st January, 1984, the Company notified the Association of their unilateral termination of the agreement.

This is your Company and if you consider arbitration is a better alternative than strike action we urge you to write to the Chairman, John Harvey Jones, requesting that the Board reinstate the agreement with ICI management and professional staff.

ROTHSCHILD ASSET MANAGEMENT (CI) St Julian's Court, St Pater Port, Guarnsey . 0481 26741 O.C. INTERNATIONAL RESERVES LIMITED A\$ 15.042 DKR 150.385 Australian Dollars ... Danish Kroner + .003 + .044 + .017 8.25 Hong Kong Dollars 100,20

Daily Dealings

Today's Rates 9¾%-10¼%

Deposits of £1,000-£50,000 accepted for fixed terms of 3-10 years, im half-yearly. Rates for deposits received not later than 20.4.84 are fixed for the terms shown:

EQUITIES | F.P.|174 | 108 | 78 | Do. N/V A SDp. | 109 | +7 | | 135 | F.P.|175 | 156 | 140 | SMexicowF reProduct | 150 | +5 | | 135 | F.P.| 10/6 | 120 | 02 | SMth See & Gen. On Still 8 +8 | | 136 | F.P.| 27/4 | 268 | 280 | Our Price 20p. | 28c | +5 | | 136 | F.P.| 13/4 | 151 | 140 | Our Price 20p. | 28c | +5 | | 130 | F.P.| 13/4 | 151 | 138 | Septator Intl. | 5p.| 250 | +5 | | 160 | F.P.| 13/6 | 256 | 225 | 5 | | 170 | F.P.| - 680 | 640 | Reed Stenh's Cls. At 67c | | 171 | F.P.| - 675 | 650 | Do. Cisas Cl. | At 67c | | 172 | F.P.| 25/4 | 30 | 30 | 30 | 30 | 30 | 30 | | 182 | 108 | Septems Reliability See 477 | +2 | | 145 | F.P.| 27/4 | 198 | 168 | 27 of (W. & J.) Op. | 170 | 187 | | 146 | F.P.| 27/4 | 198 | 168 | 27 of (W. & J.) Op. | 170 | 187 | | 147 | F.P.| 27/4 | 198 | 168 | 27 of (W. & J.) Op. | 170 | 187 | | 148 | F.P.| 27/4 | 198 | 168 | 27 of (W. & J.) Op. | 170 | 187 | | 148 | F.P.| 27/4 | 198 | 168 | 27 of (W. & J.) Op. | 170 | 187 | | 148 | F.P.| 27/4 | 198 | 168 | 27 of (W. & J.) Op. | 170 | 187 | | 148 | F.P.| 27/4 | 198 | 168 | 27 of (W. & J.) Op. | 170 | 187 | | 148 | F.P.| 27/4 | 198 | 168 | 27 of (W. & J.) Op. | 170 | 187 | | 150 | F.P.| 17/4 | 198 | 168 | 27 of (W. & J.) Op. | 170 | 170 | 170 | | 150 | F.P.| 17/4 | 198 | 168 | 27 of (W. & J.) Op. | 170 | 170 | 170 | | 150 | F.P.| 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17/4 | 17

FIXED INTEREST STOCKS

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"RIGHTS" OFFERS

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-		24	High	Low		e a	L
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PENDING DIVIDENDS

Dates when some of the more important company dividend statements may be expected in the next few weeks are given in the following table. The dates shown are those of last year's amouncements except where the forthcoming board meetings (indicated thus*) have been afficially notified. Dividends to be declared will not necessarily be at the amounts in the column headed "Amouncement last year."

nouncements last year."		
Announce- Date ment lear year	Date	Announce- ment lest year
estApr 17 Interim 2.1	Hawker	
Smithers. May 8 / Interim 4.0	SiddeleyApr 17 Hepworth (J.) May 10	Final 8.1 Interio 1.5
o American	Phouse of	Inminu, i.a.
Inv TstApr 14 Final 440c	FraserApr 26	Final 5.6
c Paper	Laing (J.)Apr 28	Final 1.875
Inde. May 10 Interim 1.2	Lend Securities May 19	Finel 6.25
Foods May 23 Sec let 3.2	LaportsApr 26	Final 5.25
Bank May 25 Final 4.5	Laird GroupApr 8	Final 2.1
Bank. May 25 Finel 4.5 May 21 Interim 14 cts	Scottleh May 12	faterim 1.0
motive	London and	
ProductsApr 20 Final nil	Northern May 25	Finel 2.5
Rubber May 25 Interim T	Marks and	
May 18 Final pli	SpencerMay 4	Final 3.25
	Manzias (J.)Apr. 30 MinutApr 20	Final 2.1
Apr 5 Final 5.01	Minuter Assets May 25	Final 3
IntiApr 17 Final nil	Montem	, I Little L
of InstandMay 17 Final 10.0	(John)May 4	Final 8.4
of	*NELADT 17	Final 3.25
ScotlandApr 18 Final 13.5	Alectoration	
ner .	Pastson (S.)Apr 17	Interim 2,2
HerburnApr 16 Final 1.4	Pleasey	Final 7,45 Final 1,945
wood 2,93	Polly PockMay 18	Interim 2
HodgeApr 22 Final n6	'RHMMay 24	Interim 1.53
Ciecia	RHPApr 10	Interim 2
IndsApr 28 Finel 12.25	Royal Bank of	Final 8.6
May 25 Final 6	ScotlandMey 5	Interior 3.0
Stores Mey 8 Final 3.5	Samuel PropsApr 26	Interior 1.43
tApr 11 Interim 1.0	· Serbabury (J.) May 24	Final 3:96
si and	Sears May 10 Simon EngApr 25	Final 2.1
Counties May 25 Final 2	Simon EngApr 25	Final 9,25
Counties. May 25 Final 2 Allen May 25 Finel 19.95	600 GroupJun 7	Final due
inMay 10 Final 7.0	Smith (W.H.)Apr 20	Final 4.25
aulds	ServiceApr 29	Final 3.638
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er Apr 20 Interim 0.9	Tate & Lyle May 25	Interim 4.5
themsMey 20 Finel 4.76 lerApr 20 Interim 0.8	Talephote	
America Apr 25 Fixel 3.5	Rentals Apr 28	Final 3.0
en .	House May 9	Interior 4.0
FerriesMey 0 Final 2.35	UBMApr 26	Final 1.2
mtApr 24 Final 1.65	House May 8	Fia of 3.2
	Velix.	
studiling Apr 25 Final 1.9	Brewedes May 12	interim 3.02

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Swiss craftsmanship in international investment.

U.S. \$100,000,000

National Westminster Bank PLC

Floating Rate Capital Notes 1994



In accordance with the provisions of the Notes notice is hereby given that for the six months interest period from 16th April, 1984 to 16th October, 1984 the Notes will carry an Interest Rate of 1138% per annum. The interest payable an the relevant interest payment date, 16th October, 1984 against Coupon No. 11 will be

By Mnrgan Guaranty Trust Company of New York, London Agent Bank



State Bank of India

rofessional assessment of

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US \$30,000,000

Negotlable Floating Rate Dollar Certificates of Deposit due 1987

In accordance with the provisions of the Certificates, notice is hereby given that the rate of interest for the period from 17th April 1984 to 17th October 1984 has been established at 111/1/1e per cent per annum. The interest payment date will be 17th October 1984. Payment which will amount to US \$14,376.30 per

Certificate, will be made against the relative Certificate. Bank of America International Limited

FI	NAN	C	AL	Т	IME	S	ST	0	CK	11	IDICES	•
-											1983/84 High Low	

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Fixed Interest	86,42	96.46	86,43	86,54	86.48	86,58	87,48	86.35	150.4	50,58
Industrial Ord	8 9 e,2	0,888	886,1	878.6	867.2	860.4	901.4	770.3	901.4	49,4
Gold Mines,	075.0	070,8	668,5	069.7	867.3	695.6	711.7	520,2	734.7	43.5
FT Act. All Bhare	532,00	586,00	\$84.5 2	520,81	016,64	51e,21	00,250	470,03	552.00	01,92
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3i Term Deposits

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formerly Die Erste österreichische Spar Casse US\$40,000,000

Die Erste österreichische Spar-Casse-Bank

(Established in Austria with Emilial Salety in 1819)

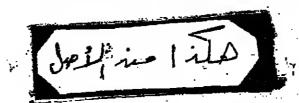
First Austrian B

April 16th, 1984

Subordinated Floating Rate Notes Due 1992

Notice is hereby given pursuant to the Terms and Conditions of the Notes that for the six months from April 17th, 1984 to October 17th, 1984 the notes will carry an Interest rate of 11% ber annum. On October 17fti, 1984 Interest of US\$575.05 will be due per US\$10,000 Note against Coupon No. 5.





Régie Autonome des Transports Parisiens

ECU 60,000,000 Guaranteed Bonds

comprising

ECU 40,000,000 10% per cent. Guaranteed Bonds due 1992 ECU 20,000,000 11 per cent. Guaranteed Bonds due 1994

> Unconditionally guaranteed by The Republic of France

Crédit Lyonnais

Banque Bruxelles Lambert S.A. Crédit Commercial de France

Algemene Bank Nederland N.V. Banque Indosuez Banque Internationale à Luxembourg S.A. Caisse des Dépôts et Consignations Commerzbank Aktiengesellschaft Crédit Communal de Belgique S.A./Gemeentekrediet van België N.V. Daiwa Europe Limited Istituto Bancario San Paolo di Torino Kredietbank International Group Merrill Lynch Capital Markets Nippon European Bank S.A. - LTCB Group Nomura International Limited Socraté Générale de Banque S.A.

Al Saudi Banque Amro International Limited Banca Commerciale Italiana Banca del Gottardo Bank fur Gerneurwirtschaft Aktiengesellschaft Banque ou Benefux S.A. Banque Prancaise du Commerce Exterieur Banque Cherale du Luxembourg S.A. Banque Prancaise du Commerce Exterieur Banque Cherale du Luxembourg S.A. Banque Prancaise du Commerce Exterieur Banque Cherale du Luxembourg S.A. Banque Prancaise du Commerce Exterieur Banque Cherale du Luxembourg S.A. Banque Prancaise du Commerciale Italiana Banca del Gottardo Bancue Marionale de Paris Banque Paribas Belgique S.A. Banque Private de Gestion Financiere "B.P.G.F." Banque de l'Umon Européenne Banque Worms Bayensche Hypotheken- und Wechsel-Bank Aktiengesellschaft Banque de l'Etat Luxembourg Care Centrale Raifleisenkas C.V. Belgium Chase Manharttan Limited Cittoorp Capital Markets Group C.I.N.Oyens & Van Eeghen N.V. Compagnie Monegaque de Banque Credit Industriel of Alsace et de Lorraine Crédit Industriel et Commercial Crédit du Nord Credito Italiano Del-Ichil Kangyo International Limited Den Danske Bank International S.A. Den norske Creditibank (Luxembourg) S.A. S.A. Dewfin N.V. Dominion Securities Ames Lumited Credit Danske Bank International Limited Ensklida Securities Standinaviske Ensklida Limited Genossenschaftliche Zentralbank AG - Vienna Grozentrale und Bank der distantische Paris Raifleisenschaft Genossenschaftliche Zentralbank AG - Vienna Grozentrale und Bank der distantische Paris Altengesellschaft Gitzenken Hambros Bank Limited Hessische Landesbank - Grozentrale Altengesellschaft Grozentrale Credit und Morgan Stanley International Limited Mitsul Finance Europe Limited Morgan Guaranty Ltd Worden Bank (Underwriters) Limited Stanley International Limited Morgan Guaranty Ltd Morgan Stanley International Limited Orion Royal Bank Limited PK Christiania Bank (UK) Ltd. Postipanka Privater Agentical Altendesbank no The Nikklo Securities Scotete Generale Alsacenne de Banque, Luxembourg Societé Sequanies de Banque Sparebanken Oslo Alzershus Sparebanken Oslo Alzershus Spar S.G. Warburg & Co. Ltd. Westdeutsche Landesbank Girozentrale Wood Gundy Limited Yamaichi International (Europe) Limited Yasuda Trust Europe Limited

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To Dr Peter Rawlinson, Plessey Controls Limited, Sopers Lane, Poole, Dorset BH17 7ER. Please send me the Business Guide to

THE ROYAL BANK OF CANADA

NOTICE OF PARTIAL REDEMPTION

TO THE HOLDERS OF 10% DEBENTURES DUE MAY 15, 1994 OF THE ROYAL BANK OF CANADA

NOTICE IS HEREBY GIVEN, pursuant to the provisions of the Trust Indenture bearing formal date of April 15th, 1971 (as supplemented) and to the Eighth Supplemental Trust Indenture bearing formal date of May 3rd, 1979 therein collectively referred to as the "Trust Indenture") between The Royal Bank of Canada therein referred to as the "Bank") and Montreal Trust Company (herein referred to as the "Trustee"), as Trustee, providing inter alia for the creation and issue of 10% Debentures of the Bank, that CS1,500,000 aggregate principal amount of 10%. Debentures due May 15th, 1994 of the Bank in coupon bearer form in the denomination of C\$1,000 each bearing the distinguishing letter "L" and

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selected will be redeemed on May 15th, 1984 in lawful money of Canada at the principal amount thereof upon presentation and suirender of the said Debentures (accompanied by the interest coupons appertaining thereto which mature after May 15th, 1984) at the option of the holder, at any

Orion Royal Bank Limited, 1 London Wall, London EC2Y 5JX, which replaces Orion Bank Limited as Principal Paying Agent: The Royal Bank of Canada Main Branch, 1 Place Ville Marie, Montreal H3C 3B5, The Royal Bank of Canada, 6 Lolhbury, London EC2R 7JY: The Royal Bank of Canada (France), 3, rue Scribe, 75009 Paris, The Royal Bank of Canada A.G., Bockenheimer Landstrasse 61, D-5000 Franktin (Main) 1, which replaces Burghardt Und Nottenbehm Bank A G; Chase Manhattan Bank Luxembourg S.A., 47 Boulevard Royal, Luxembourg; Morgan Guaranty Trust Company of New York, Avenue des Arts 35, B-1040 Brussels; Westdeutscha Landesbank Girozentrale, Friedrichstrasse 56, 4000 Düsseldorf 1.

Debenture Holders should detach the May 15th, 1984 coupon and present it in the usual way.

NOTICE IS ALSO HEREBY GIVEN pursuant to the terms of the Trust Indenture, that all interest on the 10% Debentures so called for demption shall cease to be payable from and after the said 15th day of May 1984 and coupons for interest to accrue after such date upon said Debentures shall be void.

DATED AT LONDON this 13th day of April, 1984 THE ROYAL BANK OF CANADA, MONTREAL TRUST COMPANY, TRUSTEE BY ORION ROYAL BANK LIMITED.

ORION ROYAL BANK LIMITED A member of The Royal Bank of Canada Group

Banque Paribas

Crèdit Lyonnais

Blyth Eastman Paine Webber

LTCB International Limited

Saudi American Bank

Socièté Générale

Morgan Grenfell & Co. Limited

Dresdner (South East Asia) Limited

Fuji International Finance Limited

Kidder, Peabody International Limited

The National Bank of Kuwait S.A.K.

Sumitomo Trust International Limited

Mitsubishi Finance International Limited

NEW'ISSUE

These Notes busing been sold, this unnonneement appears as a matter of record only.



U.S. \$100,000,000 Republic of Portugal

Floating Rate Notes Due 1992

Merrill Lynch Capital Markets

BankAmerica Investment Banking Group

Barclays Bank Group Citicorp Capital Markets Group

Daiwa Europe Limited European Banking Company Limited

IBJ International Limited

Lloyds Bank International Limited

Manufacturers Hanover Limited

Samuel Montagu & Co. Limited Morgan Guaranty Ltd

Sanwa Bank (Underwriters) Limited

Saudi International Bank

Société Générale de Banque S.A.

Swiss Bank Corporation International Limited

The Taiyo Kobe Bank (Luxembourg) S.A.

Tokai International Limited

April, 1984

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In accordance with the terms and conditions of the Notes and the provisions of the Reference Agency Agreement between The Industrial Bank of Japan Finance Company N.V., The Industrial Bank of Japan Limited and Citibank, N.A., dated October 8, 1980, notice is hereby given that the Rate of Interest has been fixed at 113% p.a. and that the interest payable on the relevant Interest Payment Date, October 15, 1984, against Coupon No. 8 will be 115 5584 55. April 13, 1984, London By: Citibank, N.A. (C55I Dept), Reference Agent CITIBANCO

IBJ The Industrial Bank of Japan, Limited **London Floating Rate Certificates of Deposit** \$10,000,000

due October 15th 1984 For the six months April 13th 1984 to October 15th 1984 the C.D.'s will beer an interest rate of 111/2% per annum.

Samuel Montagu & Co. Limited

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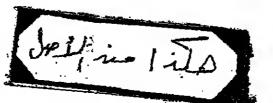
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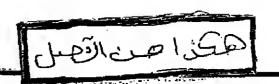
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This document includes particulars given in compliance with the Regulations of the Council of The Stock Exchange for the purpose of giving information with regard to the Company. The Directors have taken all reasonable cure to ensure that the facts stated herein are true and accurate in all material with their are no other material facts the omission of which would make misleading any statement herein whether of fact or of opinion. All the Directors accept responsibility accordingly. Application has been made to the Council of The Stock Exchange for the Shares of each class of the Company or be allowed to be admitted to the Official List. Copies of this Prospectus and of the documents specified herein have been delivered for registration to the Registrar of Companies in England.

Old Court Currency Fund Limited

The Company's Manager is N. M. Rothschild Asset Management (C.I.) Limited (the "Manager"), a wholly owned subsidiary of

N. M. Rothschild & Sons Limited

Initial Offer for Subscription

of up to 50,000,000 Participating Redeemable Preference Shares of U.S. 1 cent each ("Shares") of the following classes and at the following prices

payable in full on application.

	—— Cla	sses of Shares and p	rice per Sh	are —	
Australian Dollar Shares	A.\$15	_	•	Japanese Yen Shares	¥ 3,500
Belgian Franc Shares (Financial)	Fin. B.Fr. 800	Dutch Guilder Shares	Fis. 50	Singapore Dollar Shares	S.\$30
Canadian Dollar Shares	Can. \$20	French Franc Shares	F.Fr. 100	Sterling Shares	£10
Danish Krone Shares	D.Kr.150	Hong Kong Dollar Shares	H.K.\$100	Swiss Franc Shares	Sw.Fr.30
Deutschemark Shares	DM.40	Italian Lira Shares	Lit. 25,000	United States Dollar Shares	U.S.S15

The consent of the Advisory and Finance Committee of the States of Guernsey under The Control of Borrowing (Bailiwick of Guernsey) Ordinances 1959 to 1976 has been obtained for the issue of up to 50,000,000 Unclassified Shares of U.S. 1 cent each either as Nominal Shares or as Shares in the Company. It must be distinctly understood that in giving this content the Committee takes no responsibility for the financial soundness of any schemes or for the correctness of any of the statements made or opinions expressed with regard to them.

Shares may not be acquired or held beneficially by any person resident for tax nurroses in Guernsey. Alderney or Herm

The Shares have not been registered under the United States Securities Act of 1933 and, except in a transaction which does not violate such Act, may not be directly of indurectly effered or sold in the United States of America (including its termiories, possessions and areas subject to its jurisdictions or to or for the benefit of a United States person includes a national or resident of the United States of America, a partnership organized or existing in any state

This Prospectus does not constitute on Offer of Shares for subscription at any time after 30th April, 1984.

DIRECTORS
Leopoid de Rothschild (Chairman),
New Court, St. Swithin's Lane, London EC4P 4DU, Executive
Director of N. M. Rothschild & Sons Limited, London.

St. Julian's Court, St. Peter Port, Guernsey, Channel Islands,
Manager of N. M. Rothschild & Soms (C.I.) Limited
and a Director of N. M. Rothschild Asset Management (C.I.) Limited,
Guernsey, Channel Islands,

Graham Barker. New Court, St. Swithin's Lane, London EC4P4DU, Executive Director of N. M. Rothschild & Sons Limited, London and a Director of N. M. Rothschild Asset Mattagement (C.I.) Limited, Guernsey, Channel Islands.

Henry Broughton,
Ingleside, Croute Havilland, St. Peter Port, Guernsey,
Channel Islands, Former Chairman of The Investment Trust of
Guernsey Limited and former Senior Partner of Black, Geoghegan & Tili;
Chartered Accountants.

Alan Graham,
St. Julian's Court, St. Peter Port, Guernsey, Channel Islands,
Assistant Director of N. M. Rothschild & Sons Limited, London and Executive Director of N. M. Rothschild & Sons (C.J.) Limited, Guernsey, Channel Islands,

Richard Katz,
New Court, St. Swithin's Lane, London EC4P4DU, Executive
Director of N. M. Rothschild & Sons Limited, London.

Percy Ozanne,

The Emeralds, Longue Rue, Vale, Guernsey, Channel Islands.

Advocate of the Royal Court of Guernsey, and a Consultant to and former Senior Partner of Ozanne, van Leuven & Perrot, Advocates.

Charles Tracy,
St. Julian's Court, St. Peter Port, Guernsey, Channel Islands,
Managing Director of N. M. Rothschild & Sons (C.I.) Limited and a
Director of N. M. Rothschild Asset Management (C.I.) Limited,
Guernsey, Channel Islands.

John Vine,
St. Julian's Court. St. Peter Port, Guernsey, Channel Islands,
Vice-Chairman of N. M. Rothschild & Sons (C.I.) Limited and a
Director of N. M. Rothschild Asset Management (C.I.) Limited,

Guernsey, Channel Islands

REGISTERED OFFICE
P.O. Box 309, Grand Cayman, British West Indies.

MANAGER, REGISTRAR & SECRETARY
N. M. Rothschild Asset Management (C.1.) Limited,
P.O. Box 242, St. Julian's Court, St. Peter Port, Guernsey,
Channel Islands.
Telephone: Guernsey (0481) 26741 & 26331
Telex: 4191673 & 4191507

BANKERS & CUSTODIAN
N. M. Rothschild & Sons (C.1.) Limited,
P.O. Box 58, St. Julian's Court, St. Peter Port, Guernsey,

AUDITORS

Peat, Marwick, Mitchell & Co., Chartered Accountants,
10 Lefebyre Street, St. Peter Port, Guernsey,
Chamnel Islands.

de Zoete & Bevan. 25 Finsbury rus, London EC2M 7EE, England.

LEGAL ADVISERS TO THE COMPANY In the Coyman Islands: Maples & Calder, Attorneys-at-Law, P.O. Box 309, Grand Cayman, British West Indies.

In England: Linklaters & Paines, Barrington House, 59-67 Gresham Street, Loncon EC2V 7JA, England. In Guernsey: Ozanne, van Leuven & Perrot

P.O. Box 186, 1 Le Marchant Street. St. Peter Port, Guernsey, Channel Islands.

LEGAL ADVISERS TO THE MANAGER
Ashurst, Morris, Crisp & Co.,
Broadgate House, 7 Eldon Street, London EC2M 7HD, England.

FINANCIAL OPERATIONS

ALLOTMENT OF SHARES The initial subscription lists will open at 9.00 a.m. in Guernsey on 30th April, 1984 and will close at 10.00 a.m. on that day. Settlement will be due on or perform 2nd May, 1984, and provided that settlement has been effected, allotments

After the initial offer, application for Shares of each class may be made on any Dealing Day. Application may be made either by telex or on the application form at the end of this Prospectus. Payer made in any of the currencies (except Japanese yen) listed below. Full details of the application as procedure are set out below. Shares will be issued in registered form.

INVESTMENT POLICY

The Company's investments ("Investments") in each Currency Fund will consist principally of deposits. In certain circumstances these may be supplemented by bonds, notes and money-market instroments if e more attractive return is available from these investments. No investments will be made which mature in more than twelve months. The normal policy will be to hold most livestments intil maturity.

A minimum of 20 per cent, of the value of the Investments in each Corrency Fund will normally be available at seven days' notice or less (eccept to the extent that this percentage is reduced by redemptions and conversions, when the intention will be to redistate the liquidity margin as toon as circumstances permit. This policy is intended to provide sufficient funds to enable redemptions and conversions to be effected without the premature realisation of

A conservative credit assessment policy will be pursued. Specific limits will be established for each bank and restrution with which the Company invests. Such limits are designed to ensure that there is a prodent spread of risk in each Currency Fund, except that this policy will not require the Company to make any Investment which is less than the equivalent of U.S.30.5m. Investments will only be made with banks and institutions of the highest standing. For each Currency Fund the Company will make Investments payable in the currency in which the Shares of that class are designated. However, in any such Currency Fund the Company may purchase Investments payable in another currency provided that a forward currency sale of the principal amount of the investment, plus the expected interest to maturity, is undertaken. In this way the Company may take advantage of opportunities to maximise the return for a particular currency while pursuing the principal that there should be no currency risk within each Currency Fund.

It is intended that the whole of the net income of the Company, after deduction of expenses, attributable to each class of Shares will be distributed.

Distributions will be made by way of half-yearly dividends payable on 30th June and 31st December in each year, commencing on 31st December, 1984. Shareholders may elect to receive their dividends in any of the currencies listed below.

Shareholders mey also elect to have their dividends automatically reinvested in further Shares on the Dealing Duy next following the date on which the relevant dividend will be payable by completing the appropriate section on the Application Form. Shares allotted on account of the reinvestment of dividends will be registered in the name of the Shareholder and a Share Certificate for such new Shares will be sent to the Shareholder at his risk normally within two

N. M. Rothschild Asset Management (C.I.) Limited has been appointed to manage the Investments of each Currency Fund, to undertake the Company's administration and to act as Registrar and Secretary under a Management Agreement, particulars of which are set out below. N. M. Rothschild Asset Management (C.I.) Limited, which is a wholly-owned subsidiary of N. M. Rothschild & Sons Limited, London, acts as the manager of substantial unit trusts and other similar funds in Guerasey.

CHREENC'S FUNDS

The assets and liabilities and income and expenditure allocated in each class of Shure will be applied in the Currency Fund relating in thet particular class of Shure. The Manager will normally allocate the liabilities of the Company in the Currency Fund to which they relate or, if they do not relate to any particular Currency Fund, between all the Currency Funds pro rate to their net asset value. However, there may be exceptional circumstances in which the Manager with the approval of the Auditors will be obliged to allocate them in a different way—for example if the assets of a particular Currency Fund are inadequate to meet its liabilities. Certain powers are also given to the Liquidator in this regard in the event of the Company being wound up.

PRICES, SETTLEMENT AND VALUATIONS

After the initial offer, the prices ar which Shares of each class will be provisionally allotted and redeemed will be calculated on each Dealing Day. The day on which settlement is due ("Settlement Day") will normally be two business days after the relevant Dealing Day. The prices on each Dealing Day will be calculated by reference to the projected value of the net assets of the relevant Currency Fund as at the Settlement Dey on the basis of information evailable on the Dealing Day. There will normally be a single price for the allottness and redemption of Shares of

As the normal policy will be to hold most Investments until maturity, the Investments comprised within each Currency Fund will be valued on a straight line basis, i.e. the total return achieved by holding each Investment to maturity will be calculated and the appropriate portion will be added to its value day by day.

manurity will be calculated and the appropriate portion will be added to its value day by day.

However, the Manager in its discretion, subject to the approval of the Auditors, reserves the right to value the Investments of any Currency Fund on a different basis, should this be considered more equitable. For example, in the event of a major change in interest rates or in the event of a likely capital loss, the valuation basis of the Investments affected might be adjusted to reflect their market values. The full valuation provisions are contained in the Company's Articles of Association which are available for public inspection and copies of which are available on

In the event of the relevant foreign exchange or banking markets being closed, the Settlement Day and the issue and redemption prices for Shares where payment is to be tendered in a currency other than that to which the Shares are designated, will differ from those applicable where payment is to be made in the same currency. Further information on pricing is contained to section 1 of General Information set out below.

JAPANESE YEN CLASS OF SHARES

In order to comply with Japanese Ministry of Finance requirements the subscription and redemption moneys of the In order to comply with Japanese Yen Class of Shares cannot be paid in yen but must be paid in any of the currencies listed below chosen by Japanese Yen Currency Fund will, however, at all times be maintained in or the Investor. The Investments betd in the Japanese Yen Currency Fund will, however, at all times be maintained in or

There is no charge for buying, selling or converting Shares. The Manager will receive for its services out of the respective Currency Funds an aggregate monthly fee of the per cent. of the value of the net assets of each Currency Funds as computed for calculating Share prices. This fee cannot be increased without the agreement of Shareholders in General Meeting. The Manager's out of pocket expenses in relation to its services to the Company will also be borne out of the Currency Funds.

PRINCIPAL FEATURES

Old Court Currency Fund Limited is an open-ended investment company registered in the Cayman Islands and managed in Guernsey.

The Company's objective is to provide a wholesale rate of return for liquid funds in a currency chosen by the investor with the opportunity to convert at any time between currencies at inter-bank rates of foreign exchange.

CLASSES OF SHARES AND CURRENCIES

There are fourteen different classes of Shares: one for each of the fourteen currencies listed below under "Correspondent Banks". A separate fund ("Currency Fund") will be maintained for each class of Shares. Each Currency Fund will have a portfolio of assets related to its respective currency. Thus there will be no currency risk within each Currency Fund; however, on investing in a currency other than the Sharebolder's own currency, the Investment will be subject to the movement of foreign exchange rates.

Within a conservative approach to credit assessment, the Company's policy will be to invest in deposits maturing in not more than twelve months.

ALLOTMENT AND REDEMPTION OF SHARES

Shares may be applied for on any business day in Guernsey ("Dealing Day") and may be redeemed on any Dealing Day subject to seven days' notice. Settlement will take place in accordance with euromarket practice, which is normally two business days

Shareholders can elect to convert from one class to another. Usually this can be done immediately by a telephone call to the Manager in Guernsey who can quote the rates

SHARE PRICES AND VALUATIONS There will be a single price for the allotment and redemption of Shares of each class which is calculated by reference to the value of the net assets of the relative Currency

The income accruing to each class of Share will be paid as a dividend on 30th June and 31st December in each year, commencing on 31st December, 1984. Shareholders may elect to have their dividends automatically reinvested in further Shares.

There is no initial sales charge. The Manager will charge a fee of $\frac{1}{12}$ per cent. per month on the net asset value of the Company.

It is the aim of the Company not to incur any tax on its income. It is expected that the Company will qualify as a "distributor" in respect of the new regulations being introduced by the United Kingdom Inland Revenue, in which case UK Investors will normally have their gains on disposal arising from their own currency transactions taxed as capital gains. Their income will be taxed as such.

CURRENCY ADVICE AND MANAGEMENT Arrangements can be made for the provision of a discretionary currency selection service based on investment in the Company's Shares for investors with a minimum of £100,000. Further information can be obtained from the Manager.

A Savings Plan will be operated for investors who would like to make regular investments in the Company.

Shares of each class may be redeemed on any Dealing Day by giving not less than seven days' notice by talex or in writing specifying the number and class of Shares to be redeemed and giving payment instructions for the redemption proceeds. Notice received on any day which is not a business day in Guernsey, will be deemed to have been received on the next business day. Payment of the redemption proceeds may be made in any of the currencies (except Japanese yea) listed below, either by transfer to the Shareholder's bank account or by cheque posted to the Shareholder at his registered address. The Share Certificate (with the redemption request on the reverse duly completed) must be received by the Company in Guernsey by the Dealing Day prior to the relevant Dealing Day.

The price at which Shares are redeemed will be the price calculated for the Dealing Day.

The price at which Shares are redeemed will be the price calculated for the Dealing Day except as detailed in the fifth paragraph of section 1 of General Information set out below. Fayment instructions for the redemption proceeds in be paid on the Settlement Day will be given by the Company to its bankers in Guernsey or the appropriate cheque will be posted to the Shareholder at his risk. If the Share Certificate is not received before the intended Dealing Dey, the Shares will not be redeemed until it is so received in which event the redemption price will be the price ruling for the first Dealing Day after h has been received and sentenced will take place accordingly.

All Shares of each class not previously redeemed will be redeemed by the Company on 31st December, 2084 or, if that is not a Dealing Day, on the next following Dealing Day, at the respective redemption prices on such day for settlement on the relative Settlement Day.

CONVERSION BETWEEN CLASSES OF SHARES

Shareholders may convert all or part of their holdings of any one class of Shares into Shares of another class or classes by giving notice of their requirements on any Dealing Day. The Company will endeavour to make the necessary arrangements for the foreign exchange transaction in respect of a conversion as soon as practicable after receipt of the notice. The conversion of one class of Shere into another will actually take place on a subsequent Dealing Day. The old Share Certificate should also be returned to the Company with the conversion request on the reverse duly

Conversion will take place at a rate calculated by reference to the values of the Shares of the tiasses concerned i accordance with the formule set out below. No charges will be levied by the Company on the conversion. The new Shere Certificate will not be posted to the Shareholder until the old Share Certificate, with the conversion request duly completed, has been received by the Company, but the conversion will not he delayed as a result. The right to convert is dependent on the Company having sufficient available share capital to implement the conversion. The Manager will endeavour to procure that the available capital is at a level where this will normally be

Further information is contained in section 2 of General Information set out below,

Certificates representing the Shares issued will normally be despatched within two weeks of the appropriate Settlement Day at the risk of the persons entitled thereto.

Arrangements have been made for N.M. Rothschild & Sons (C.I.) Limited to act as Custodian for investors who find the delivery of Share Certificates to end from Guerusey inconvenient. Shares can be registered in the name of Old Court Limited (N.M. Rothschild & Sons (C.I.) Limited 's nominee company) and held by that Company for the account of the beneficiel owner. The fees for this service are £25 per rustomen per annum plus £5 for each application or redemption and £10 for each conversion. Investors who are interested in this service should tick the appropriate

A Savings Plen will be available to provide a convenient method of making reguler investments in the Company by banker's standing order. Investors will be able in choose the frequency of investment subject to a minimum of £500 (or its foreign currency equivalent) per payment. Investors who are interested in this service should tick the appropriate box on the Application Form,

Prices of Shares of each class will be published daily in the Finencial Times and will also be available from the Manager. The prices published will be those applicable to the currency in which the Shares are designated.

FOREIGN EXCHANGE TRANSACTIONS

Where payments in respect of allotments or redemptions of Shares are to be tendered in neurrency other than that in which the Shares concerned are designated, the necessary toreign exchange transactions will be arranged by the Company, normally with N. M. Rothschild & Sons (C.f.) Limited, on behalf of and for the account of the Applicant of Shareholder without responsibility as respects the Company.

The Manager may in its discretion pay commission to investors' agents, without recourse to the Company. Such commissions will be calculated at the per cent. per month of the month-end value of the Shares subscribed through the agent in question. Commission will be paid in one of the currencies listed below chosen by the agent concerned.

TAXATION - (a) THE COMPANY

The Company is registered in the Cayman Islands and has epplied for, and can be expected to obtain, an undertaking from the Cayman Islands' authorities that, for a period of twenty years, no law which is enacted in the Cayman Islands imposing any tax to be levied on profits, income, gains or appreciations shall apply to the Company.

Registration and starm duty fees in the Cayman Islands on the registration of the Company amounted to the equivalent of U.S.\$1,076. The annual filing fee payeble each year by the Company in the Cayman Islands is currently the equivalent of U.S.\$579. It is the intention of the Directors that the control and management of the Company will be exercised, so far as practicable, in such a way that it will not be resident in the United Kingdom. In any event it is expected that the

Company would not be deemed to be a close company if it were so resident. It is not expected that the Company will incur any tax or be liable to pay any sterutory fees in Guernsey other than to a nominal extent.

Having regard to the manner in which it conducts its operations, the Directors consider that the Company should not, in normal circumstances, incur any taxes in the countries in whose currencies the different classes of Shares are designated.

TAXATION - (b) SHAREHOLDERS

Shareholders will not be subject to any tax in the Cayman Islands or Guernsey in respect of any Shares owned by

Clearance has been obtained from the Board of Inland Revenue of the United Kingdom ("the Reverse") under Section 464 of the Income and Corporation Taxes Act 1970 that the provisions of Section 460 of that Act (cancellation of tax advantages from certain transactions in securities) will not apply.

of tax advantages from certain transactions in securities) will not apply.

For United Kingdom tax purposes it is expected that the Company will fall within the definition of an "refishore and overseas fund" for the purposes of certain legislation proposed to be enacted in 1984. If the Company does not distribute its income in full, this would cause United Kingdom taxpayers to Suffer tax on gains arising upon disposals at the rates applicable to proone. Since the Company proposes to distribute its income in full and to comply with the other requirements in offer to obtain "distributor" status under the proposed legislation, the Directors expect that gains arising on disposals of Shares will continue to be subject to tax under the capital gains tax regime. Details of the proposed method of operation of the Company have been submitted to the Revenue. On the information supplied, including the assurance that all income of the Company will be properly distributed, and subject to the legislation being enacted in the form presently anysaged the Revenue confirmed on 13th March, 1984 that they saw no reason in principle why the Company should have difficulty in obtaining "distributor" setum.

The Revenue has also stated that, each time a Sharcholder redeems or converts his holding from one class of Shares to

The Revenue has also stated that, each time a Shareholder redeems or converts his holding from one class of Shares to mother, the element in the value of his holding on the redemption or conversion which represents moneys accrued since the last distribution date (or since acquisition, if later) will be taxed as income.

Old Court Currency Fund Limited continued

Further changes in United Kingdom fiscal legislation are proposed which, with effect from 6th April, 1984, may subject certain United Kingdom resident companies to tax on the profits of companies not so resident in which they have an interest. The proposals will affect United Kingdom resident companies which are deemed to be interested in at least 10 per cent, of the profits of a non-resident company which is controlled United Kingdom residents and which does not implement full distribution policies. The draft legislation is not directed towards the taxation of capital gains and, since the Company proposes to implement a full distribution policy, this additional legislation should not affect such companies acquiring Shares in the Company.

Subject to the proposed charge to tax on accrued income, conversion of Shares as onlined below by persons, including companies, resident or ordinarily resident in the United Kingdom for taxation purposes should not rank as a disposal for the purposes of charging tax on capital gains.

a unsposar for the purposes of charging that in suprint gains.

The attention of individuals ordinarily resident in the United Kingdom is drawn to the provisions of Section 478 of the Income and Corporation Taxes Act 1970 and in Section 45 of the Finance Act 1981. These contain provisions for preventing avoidance of income tax by individuals by transactions resulting in the transfer of income to persons fundualing companies (abroad and may render them liable to taxation in respect of undistributed income and profits

Prospective investors should ascertain from their professional advisers the consequences to them of acquiring, holding, converting, tedeering or disposing of Shares of any class under the televant laws of the jurisdictions to which they are subject, including the tax consequences and any exchange control requirements.

The Company has appointed N. M. Rothschild & Sons (C.1.) Limited as its bankers in the latter a normal banking terms for customers has regards bank charges, interest and other matters). In addition, N. M. Rothschild & Sons (C.1.) Limited or any of its associated companies may act on its normal terms in relation to the banking and foreign each large transactions to be arranged by the Company on behall of Shareholders or Applicants (as described in "Foreign Exchange Transactions" set out above).

N. M. Rothschild & Sons (C.1.) Limited also acts as Custodian of the Company's assets, for which no formal charge is

The Company's financial year will end on 30th April in each year commencing on 30th April, 1965. The Company's statutory accounts will emissis of a revenue account and balance sheet expressed in United States dollars. However, for the convenience of Shareholders, revenue accounts and balance sheets will be produced in respect of each Currency Fund in the currency in which each Currency Fund is designated.

The Annual General Meeting of Shareholders of the Company will be held in Guernsey. Notice convening the Annual General Meeting will be fowarded to Shareholders together with the annual report and accounts of the

Accountants' Report

The Directors, Old Court Currency Fund Limited

10 Lelebyre Street, St. Peter Port, Guerusey, Chunnel Islands.

Old Court Currency Fund Limited was registered under the laws of the Carman Islands on 22nd March, 1984. As at the dute of this report it has not traded and no accounts have been prepared and no dividends paid.

Yours laithfully.
PEAT, MARWICK, MITCHELL & CO.,

Charteted Accountants

GENERAL INFORMATION

(Expressions used below have the meanings ascribed in them in the Articles of Association of the Company.)

1 SHARE PRICES AND TERMS

Shares of each class may be provisionally allotted on any Dealing Day for settlement on a particular Settlement Day at a subscription price pet Share of that class determined by the Manager on the Dealing Day of not less than the redemption price for the class concerned on the same Pealing Day and for settlement on the vame Settlement Day, and not gove than a sum calculated by predicting (on the basis of information available at the time on that Dealing Day when the determination is being made) the value (calculated in accordance with the Articles of Association) of the net assets expected to be comprised within the relevant correcty. Fond as at the Valuation Point on Informally the opening of business in the relevant hinapical centrel on the Settlement Day Lafter adding thereto such sum as the Manager may consider tepresents the appropriate provision for Duties and Charges which would be incurred in the assumption that all the Investments expected to be comprised within the relevant Currenty Fund are to be purchased or acquired at the Valuation Point on the Settlement Day I and dividing the value so predicted by the number of Shares of the class concerned expected to be in usue or deemed to be in one of its Valuation Point on the Settlement Day and, alter taking account of any qualisation Payment, rounding the resulted amount amount upwards by not more than 0.1 per cent. There is player to unpose an anitial charge but the Directors have on present intention to do so.

Shares of each discussed the settlement of the Comprise an anitial charge but the Directors have on present intention to do so. 1 SHARE PRICES AND TERMS

do so.

Shares of each class may be redeemed on any Dealing Day for settlement on a panicular Settlement Day at a redemption price per Share of that class determined by the Manager on the Dealing Day at not more than the subscription price for the class concerned on the same Dealing Day and for settlement on the Settlement Day, and Isubject as provided below prot less than a sum calculated by predicting from the basis of unformation as alability and calculated in accordance with the Articles of Association) of the net assets expected to be comprised within the relevant Currency Fund as at the Valuation Point mornally the opening of business in the relevant thanacial council on the Settlement Day that their deducting therefrom such units site Manager may consider represents the appropriate allowance for Datus; and Charges in relation to the realisation of all the Jin estiments expected in he comprised within the televant Currency Fund on the assumption that such Investments are to be realised at the Valuation Point on the Settlement Day I and do using the value so predicted by the aumber of Shares of the class concerned expected to he in issue or deemed to be in issue at the Valuation Point on the Settlement Day I and do using the value so predicted by the aumber of Shares of the class concerned expected to he in issue or deemed to be in issue at the Valuation Point on the Settlement Day and, after taking account of any Equalisation Payment, rounding the resultant amount deems and so you can present on the Sarticlement Dealing memory of Shares of a particular days on a particular Dealing memory of Shares of a particular days on a particular Dealing memory of Shares of a particular days on a particular Dealing memory of Shares of a particular days on a particular Dealing memory of Shares of a particular days on a particular Dealing of the settlement Day and and the particular and the particular days on the particular memory of Shares of a particular days on a particular Dealing Dealing memory of Shares of a parti

It is intended that in normal circumstances the subscription and redemption prices of Shares of a particular class on a particular Dealing Day for settlement on a particular bettlement Day will be the same. In order to ensure fairness between Shareholders of any class, however, it may be necessare in centage circumstances for the subscription price of Shares of that class on that Dealing Day for settlement on that Settlement Day to be higher than the redemption price of Shares of that class on that Dealing Day for settlement on that Settlement Day, For example, it in order to meet redemptions it is necessary to realise Investments prematurely, any penalties or losses incutred may be reflected in the redemption price of the Shares concerned.

Shares are provisionally allotted on terms that the Applicant waives any right to receive notification thereof and that payment is due on the Settlement Day as determined by the Manager, and in the event of late arrival of funds the Applicant may be required to compensate the Company for interest lost. Allotments are treated as confirmed once the funds have been received.

If events occurring prior to the Settlement Day for redemption shall in the opinion of the Manager to require, the Manager may, with the approval of the Auditors, adjust the testemption price to lake account of such eveny, and the amount payable on the Settlement Day will be adjusted accordingly. The Manager thall pay to, or be entitled to recover from, the Shareholder any additional moneys payable, or any or creat ment of testemption moneys which may in fact have been made.

In this Prospectus, references are made to redemptions and conversions taking place on a Dealing Day for settlement on a particular Settlement Day. These are in lact subject to finalisation on the televant Settlement Day, and the Shareholder remains a Shareholder, in the case of redemptions, until such Settlement Day and, in the case of conversions, retains the Shares of the original class until such Settlement Day.

Shares of any class [the "original class") may be conterted on any Dealing Day into Shares of another class (the "new class") either classing is determined by the Manager to be brought into existence. The number of Shares of the new class to be allotted and issued on contension will be determined in accordance (or as nearly as may be in: accordance) with the following formula:-

where,...

N is the countet of Shares of the new class to be aflotted and risued;

R is the monther of Shares of the original class to be convened;

R is the redemption price per Share of the original class found on a Dealing Day occurring not more than seven days after the day on which the conversion micro is recovered for settlement on the televant Settlement Day (the Settlement Day for the conversion being the due date for settlement of the underlying exchange transaction) and any capital sum pay able from the Equalisation Account, provided that, if events occurring prior to the Settlement Day shall in the opinion of the Manager so tequire, the Manager may, with the approval of the Auditors, adjust RP to take account of such events.

CF is the currency conversion factor determined by the Manager on the relevant Dealing Day for, is the event that RP is recalculated.

scription price for the new class fuling on a Dealing Day occurring not more than seven days after the day on which the conce is received for settlement on the relevant Settlement Day task any Equalization Payment payable).

3 RESTRICTIONS ON HOLDINGS

The Company reserves the right to require the redemption of Shares acquired or beld by any person in circumstances which appear to the Manager to be in breach of any applicable law or requirement of which, in the opinion of the Manager, might result in the Company suffering Lazation Of Other persons desadrant age which it would not have suffered if such person (whether alone or together with other persons) ceased to be a holder of Sheres.

The Company will maintain an Equalisation Account to ensure that the dividend payable on all Shares can be of the same as not withstanding different dates of issue of Shares. The subscription price per Share will include an Equalisation Payment for purpose which will be repeat to Shareholders with, inter also, the first dividend after the issue of the relevant Shares.

The Manager shall with the approval of the Audators declare a suspension of the determination on any Dealing Day of the value to at any Settlement Day of the per assets expected to be comprised within any Carrency Fund in the event that:-

5 TEMPORARY SUSPENSION OF DEALINGS

[23] circumstances exist as a result of which, in the opinion of the Manager, it is not reasonably practicable on that Dealing Day fairly to determine the value as at the Settlement Day of the net assets expected to be comprised within the Corrency Find concerned or it is likely that at some time on or below such Settlement Day it will not be reasonably practicable for the Company to realize to dispose of lavestments comprised within such Currency Fund, or

(b) a breakdown occurs in any of the means normally employed by the Manager in predicting the value of Investments expected to be comprised within the relative Currency Fund or when for any other reason the Manager is of the opinion that it cannot reasonably predict the value of such investments or other assets of the Company expected to be comprised within the relative Currency Fund as at the Valuation Point on the Settlement Day concerned.

It on any Dealing Day on which the redemption or conversion of Shares is due in take place the determination of the value as at the relevant Settlement Day of the net assets expected to be comprised within the Corrency Fand relating to the class of Shares being redeemed or converted is suspended, the right of the Shareholder to have such Shares redeemed or converted shall be similarly suspended and on any Dealing Day on which such redemption or conversion as so suspended be may withdraw his redemption or conversion notice ingester with his Share Certificate. Any such withdrawal shall be made in writing and shall not be effective until at has citable in received if on such withdrawal is made the day on which the redemption or conversion of such Shares shall take place shall be the first Dealing Day on which such suspension ceases to apply. Except as referred to above, redemption and conversion notices are irrevocable

6 CORPORATE STRUCTURE

6 CORPORATE STRUCTURE:

The Company was registered with limited liability in the Cayman Islands on 23nd March, 1984 under the provisions of the Companies Law Cap. 22 of the Cayman Islands as amended jibe "Law". The constitution of the Company is defined in its Memorandom and Articles of Association. The Articles of Association that Association may be altered by measure of a Special Resolution of the Company passed in accordance with the Law namely by a revolution duly proposed and passed as a Special Resolution by not less than two-drinks of the voice recorded at a General Meeting field within ten days to occ mosth alter the first General Meeting. The Company of the voice recorded at a scool General Meeting field within ten days to occ mosth alter the first General Meeting. The Company has an authorised share expiral of U.S. 51 each, which have been subscribed for in full in cost in part by or on behalf of the Manager, and 50,000,000 further shares of U.S. 51 cern cach (pending allottem called Unclassified Shares) allotted or available for allottment as Participating Redeemable Preference Shares of any class or as Nominal Shares.

The various classes of shares and the rights attaching thereto are as follows:-

The various classes of shares and the rights attaching thereto are as follows:—

Participating Redeemable Preference Shares.

On or be fore the allottness or provisional allottness of each Share, the Manager (on behalf, and subject to the overall supervision, of the Directors in accordance with the Management Agreement (determines the currency at which such Share shall be designated, and the Shares are disaded into different classes according to the currency in which they are designated. All moneys payable on or in respect of a Share including the subscription and redemption moneys in report thereof) are payable in the currency in which such Share is designated teacept in the case of subscription and redemption moneys for Japanese Yea Shares). The Manager has designated classes of Shares in Australian dollars, Finneal Helpan trans. Canadian dollars, Danish kroner, Destschemants, Dutch gailders, French transc, Ualian lite, Japanese yea, Hong Rong dollars, Supprove dollars, Sterling, Swiss france and United Sones dollars. The Manager may in the future designate new classes of Shares in other currencests. Holders of Shares of Shares of each class are ontitled to receive notice of General Meetings and to attend and vote thereat. On a poll, a holder is entitled to one write for each Share of any class held. The redemption and conversion rights attached to Shares are described above. Finacions of Shares will be issued where any subscription moneys are not as each unlittle of the subscription for where, on conversion, the number of Shares of the new class to be aliented is not a whole number. A fraction of a Share shall rank part passu and proportionately with a whole Share.

Deferred Shares

The Deferred Shares exist solely to comply with the Law, which requires that the Shares have a preference over another class of capital. The holders of the Deferred Shares are entitled to receive nonce of General Meetings and to attend and wote thereat. On a poil a holder of Deferred Shares is cautiled to one vote for each such Share held by him. Deferred Shares are not redeemable.

assigned Sources. These may be issued to Participating Redeemable Preference Shares of any class or as Nominal Shares

Mountal Shares can only be issued as par and for the purpose of producing tunds for the redemption of the par value of Shares of Nommal Shares will be issued and a fraction of a Nommal Shares will be issued and a fraction of a Nommal Shares will rank part pasts and proportionately with a whole Nommal Share. Nommal Shares are redemathle at part. Nominal Shares may be converted into Shares of any cases a a procept a share equal to the appropriate establishment of Share concerned plus any Equalisation Payment as described above less an amount equivalent to the commal value of work Share. Holders of the Nommal Shares are entitled to receive notice of General Meetings and to attend and vote therest. On a poll a holder is entitled to one vote in respect of all Nommal Shares beld by him. All Nominal Shares will be issued to the Manager.

Rights on a winding up

In the event of the Company being wound up the Liquidator will apply the assets of the Company in satisfaction of eroditors' claims
in such manner and order os he thinks it. The Liquidator will in relation to the assets available for distribution among the Members
make such transfers thereof to and from Currency Funds as may be necessary in order that the effective burden of such creditors'
claims may be shared between the holders of Sharen of different classes in such proportions as the Liquidator thinks equivable having
regard to the provisions concerning the allocation of assets and liabilities to Currency Funds contained in the Articles of Association.

The assets available for distribution among the Members will then be applied to the following priority:-

The assets available for instrument among the overlinests will use it appear to the contenting protein of the class is designated (or to such other currency as the Liquidator may determine) as nearly as possible equal just the model-market rate of exchange prevailing in the foreign exchange markets at a time selected by the Liquidator which is within the fourteen days immediately preceding the date of such payment to the nominal amount of the Shares of such class held by such holders respectively provided that there are sufficient assets available in the relevant Currency Fund to enable such payment to be made. In the event that, as regards any class of Shares, there are an assufficient assets available in the relevant Currency Fund to enable such payment to be made, recourse will be had.—

III first; to the assets of the Company not comprised within any of the Currency Funds; and
(at accordly, in the assets remaining in the Currency Funds for the other classes of Shares Jafter payment to the holders of the
Shares of the classes to which they relate of the amounts to which they are respectively entitled under this paragraph (a))
pro rate to the total value of such assets remaining within each such Currency Fund.

(b) Secondly, in the payment to the holders of the Nominal Shares of sums up to the nominal amount paid up thereon out of the assets of the Company not composed within any of the Currency Funds remaining after any recourse thereto under paragraph (alit) above. In the event that there are insufficient assets as aforesaid to ctable such payment in full to be made, on recourse will be had to the assets comprised within any of the Currency Funds.

(c) Thirdly, in the payment to the holders of the Deferred Shares of sums up to the nominal amount paid up thereou out of the assets of the Company not comprised within any of the Currency Funds remaining after any recourse thereto under paragraph to it is it is above and after payment in that to the holders of the Normal Shares under paragraph (b) above. In the event that there are insufficient assets as aloresaid to enable such payment in full to the holders of the Deferred Shares to be spade, no recourse will be had to the assets comprised within any of the Currency Funds.

(d) Fourthly, in the payment to the holders of each class of Shares of any balance then remaining in the relevant Currency Fund, such payment being made in proportion to the number of Shares of that class held. (e) Fifthly, in the payment to the holders of the Nominal Shares of any balance then remaining and not comprised within any of the Currency Funds, such payment being made in proportion to the number of Nominal Shares held.

A. Subject to the provisions of the Law, all so any of the appearal rights for the time being attached to any class of shares for the time.

A. Subject to the provisions of the Law, all so any of the appearal rights for the time being attached to any class of shares for the time to time (whether or not the being assued may Junkess of the rots of the terms of state of the consent in writing of the holders of not less than three-fourths of the sound shares of that class or with the sanction of a resolution passed by a majorary of three-fourths of the votes cast at a separate issued shares of that class of with the sanction of a resolution passed by a majorary of three-fourths of the votes cast at a separate General Meeting of the holders of such shares on the Register at the date on which notice possible rhand all such classes would be For such purposes the Direction may treat all the classes to Sheres as forming one class if they consider that all such classes. To any such affected in the same way by the proposals under consideration but to any other case, shall treat them as exparate classes. To any such affected in the same way by the proposals under consideration but to any other case, shall treat them as exparate classes. To any such aspects of the class party. So that the necessary quorum shall be two Members of the class present in person or by provy, that every holder of shares of the class shall be entitled on a poil to one vote for every such share beld by him and that any holder of shares of the class present in person or by provy may demand a poil.

B. The upits attached to each class of Shares shall be deemed to be varied by the creation or issue of our chars (other than Shares).

B The rights attached to each class of Shares shall be deemed to be varied by the creation or issue of ony share (other than Shares of any class) ranking part passes with or in prioruy to them as respects participation in the profits or assets of the Compuny.

C. Subject to paragraph B abov e. the special rights anached to any class of shares having preferential rights shall (unless otherwise expressly provided by the conditions of issue of such sharest the deemed not in be varied by:-

(A) the creation, allotment or issue of further shares ranking part passes
therewith: or

therewith: or

| the creation, allotment or issor of Deferred Shares; or
| the creation allotment or issor of Deferred Shares; or
| the creation allotment, issue or redemption of Shares of any clear; or
| the allotment, issue or redemption of Shares of another class as provided for in the Articles of Association; or
| the conversion of Shares of any class into Shares, or
| the allotment, issue or redemption of Normalal Shares, or
| the conversion of Normalal Shares into Shares as provided for in the Articles al Association; or
| the currency of Normalal Shares into Shares as provided for in the Articles al Association; or
| the currency of Normalal Shares into Shares as provided for in the Articles and charge flabilities to the various
| the currency Funds, and to transfer the same to and from Currency Funds, as provided for to the Articles of Association.

inimum Valuation

If on any Dealing Day the negregate of the predicted net asset values of all the Currency Fands (calculated as though for the purpose of computing subscription prices on the basis of settlement on the normal Settlement Days) shall be less than the equivalent of U \$ \$5,000,000 the Company may on that Dealing Day (or such other Dealing Day within one month thereafter as the Manager may determined redorm at the respective redormption prices on such Dealing Day for settlement on the respective relevant Settlement, Days, all thus not some) of the Shares not previously redeemed.

The Company does not have any detentures, loan capital, mortgages, charges (save for the lien referred to in section 10 of General Information), bottowing, or indebtedness in the nature of bottowing, including back overdrafts and liabilities under acceptances or acceptance credits, hire purchase commitments, or guarantees or other material confingent liabilities.

Under the Articles of Association of the Company, the Directors may exercise the Company's powers to borrow and to change its ament, but they are required to restrict the borrowing of the Company and to exercise all voting and other rights of powers of control exercisable by the Company in relation to its subsidiary companies it it any) so as to secure the regards subsidiary companies so far as by such exercise they can secure that the aggregate amount for the time being remaining undustranged of all moneys borrowed by the Group is such expression means and includes the Company and its subsidiaries for the time being includes of all moneys borrowed by the Group is such expression means and includes the Company and its subsidiaries for the time being includes of any fixed or mindiant premium payable on final repayment hat exclosure of inter-Group borrowing shall not except with the consent of the Company in General Meeting exceed an amount equal to the Share Capital and Consolidated Reserves (as defined in the Articles of Association).

Under normal circumstances these powers will not be exercised and in any event it is not intended to make use of them except on a short-term beaus such as to avoid the need in realise investments prematurely to much redemptions.

There are no existing or proposed service agreements between the Company and any of its Directors. A Director is not required to hold any shares by way of qualification. There are on provisions requiring Directors to retire at any specified age.

Directors' Remuneration

The aggregate amount of Directors' ices is currently U.S.\$13,500 per amount. The Articles of Association of the Company contain procurate the following effect:—

The aggregate amount of Directors' ices is currently U.S.\$13,500 per amount. The Articles of Association of the Company contain procurate the desired to the Company contains the desired to the Company contains the desired to the Company contains the Company conta The Directors shall be entitled to such remuneration as they may from time to time determine. Such remuneration shall be deemed to accrue from day to day. The Directors and any alternate Directors may also be paid all travelling, hotel and other expenses properly incurred by them in uttending and returning from meetings of the Directors or any committee of the Directors or day of the directors of the Directors of the Directors of the remuneration of parts special remuneration to any Director when being called upon, shall perform any special or extra services to or at the request of the Company.

(i) (a) A Director may hold any other office or place of profit under the Company (other than the office of Auditor) in conjunction with
his office of Director on such terms as to tenure of office, and otherwise as the Directors may determine.

(b) No Director on such terms as to tenure of office, and otherwise as the Directors may determine.
(b) No Director or intending Director shall be disqualified by his office from contracting with the Company either as wendor, purchaser or otherwise, nor shall any such contract or any contractor arrangement entered into by or on behalf of the Company in which any Director is in any way intensed be lable to be avoided, not shall any Director so contracting or being so interested be liable to account to the Company for any profit realised by any such contract or arrangement by reason of such Director bedding that office or of the fiduciary relationship thereby established, but the nature of his interest miss be declared by him at the nectting of the Directors at which the question of entering into the contract to arrangement is first taken into consideration, or if the Director was not at the date of that meeting interested in the proposed contract or arrangement, then at the fact meeting of the Directors held after be becomes so interested in a contract or arrangement after it is made, then at the first meeting of the Directors held after be becomes noticersted.
A second action to remain a meeting of the Directors held after by a member of any meeting of any meeting of the Directors.

A general notice in writing given to the Directors by any Director to the effect that he is a member of any specified company firm, and is to be regarded as interested in any contract which may thereafter be used with that company or firm, shall [if as Director shall give the same or a meeting of the Durector to shall like reasonable steps in secure that the same is brought up a read at the next meeting of the Directors after it is given) be deemed a policient declaration of interest in relation to any contra

A Director's voting rights in respect of matters in which he is materially interested are restricted in certain cases, but the Company has power by Ordinary Resolution to suspend or relax such restrictions or to ratify any transaction nor duly authorised by reason of a contravention thereof. Director may act by himself or through his from to a professional capacity for the Company, and be to his firm shall be led to remuneration for professional services as if he were not a Director, provided that nothing herein contained shall orde a Director or his firm to act as Auditor to the Company.

(ii) Any Director may continua to be or become a director, intanger director, manager or other officer or member of any company pronoted by the Company in which the Company may be interested or associated in business, and on such Director shall be secountable for any remuneration or other benefits received by him as a director, managing director, managing director, managing director, manager, or other officer or member of any such other company. The Directors may exercise the voting power contend by these in any other company be left or owned by the Company or exercisable by them as directors of such other company, in such manner in all respects as they think fit (including the exercise thereof in Livour of any resolution appointing themselves or may of them, directors, managing directors, managers or other officers of such company, or wong or providing for the payment of remaneration to the directors, managing therefore, managers or other officers of such company).

APPOINTMENT OF MANAGER ACCRESSORIAN

The Articles of Association of the Company contain provisions to the following effects—

(i) The Directors may approxim any person, firm or corporation to act at manager of the 'Company (the "Manager") and may delegate to such Manager any of their powers and duties, other than the power to make colls or forfeit shates, with such powers of delegation and such restrictions at they think fit and either collactually with or to the exclusion of their own powers.

Of delegation and such restrictions as they think fit and either collaterably with or to the exclusion of their own powers.

(ii) The terms of any agreement entered into by the Company appointing any Manager (other than the original agreement entered and penor in the initial usue of Shates appointing the first Manager), and any variations made after the initial issue of Shates any such agreement them in love functioning such original agreement), abail be subject to approval by a resolution of a separate General Meeting of holders of Shates who are on the Register at the date on which notice of such Meeting is given and passed by an absolute majority of the votes given provided that no such approval shall be required, to the case of a variation to an assum, agreement, if the Manager considers that any such variation is necessary or expedient having regard to the provisions of any fiscal legislation, actual or proposed, of the Company, the Auditors and the Manager cach certify that any such variation does not materially prejudice the interests of the holders for the time being of the Shates or any of them and does not operate to release the Manager to any material extent from any responsibility to the Company.

(iii) The Directors may appoint a Custodian in be responsible for the safe costody of any of the assets of the Company and to perform such other duties upon such terms as the Directors may determine. The tenumeration (if any lof any such Custodian shall be payable by the Company. The terms of appointment of any such Custodian may antherise such Custodian to appoint (with powers of sub-delegation) sub-custodians, monimers, agents or delegates at the expense of the Company or otherwise.

10 INDEMNITIES AND DISCLOSURE OF INFORMATION

The Articles of Association contain provisions indemnifying the Directors, Secretary and other officers and servants of the Company against any actions, costs, charges, losses, damages and expenses incurred or sustained by reason of any contract extend into or set or comission in or about the execution of their duty or supposed day unless due to their on a wilful act, neglect or default, and provide that the amount for which such indicaulty is provided shall immediately attach as a fien to the property of the Company and have priority as between the Members over all other claims. The Articles of Association also contain provisions exempting the foregoing from flability is certain circumstances unless due to their own willul act or default. In addition, they provide that the Manager and any Castodian shall be entitled in such indemnity from the Company upon such terms and subject to such conductions and with sect entitlement to have recovers to the assets of the Company with a view in meeting and discharging the cost thereof is shall be provided under the Management Agreement or any Castodian Agreement [as applicable].

The Company, the Secretary, the Manager and any Custodian may, if hasfully required to do 40, disclose information to their possession reparture the Company or its officers or any Member.

II MISCELLANEOUS

(a) The Company is not engaged in any litigation and the Directors are not aware of any hitigation or claims pending or three against the Company.

(b) The Company has not established a place of business in Oreat Britain. The Company has no subsidiaries (c) No shares or loan capital of the Company beve been or are agreed or proposed in be issued as fully or partly paid up others cash.

(e) No shares or loan capital of the Company are under option or agreed conditionally or unconding (f) There is on property purchased or acquired by the Company or proposed to be purchased or acquired, which is to be paid for wholly or partly out of the proceeds of this issue or the purchase or acquirent on which has not been completed at the date of issue of this Prospectus.

(g) Save as disclosed in paragraph (I) below, on amount or benefit has been paid or given (or is intended to be paid or given) to any

(b) Save as disclosed in Section 12 and paragraph (i) below and under the beading "Management and Administration", on Director of the Company has any interest, direct or indirect, in the promotion of the Company or in any states which have been acquired or dispose of by or leased to, the Company, or are proposed to be acquired, disposed of by or leased in the Company, nor is there any contract of strangement subsisting at the date of this Prospectus in which a Director is materially interested and which is Significant in relation to the branches of the Company. Percy Ozame is a Consultant in Ozame, van Leuven & Perror, which has received a fee in respect of its profession to the formation and launch of the Company.

(j) Name of the Directors of the Company has an interest in the share capital of the Company which would be required to be shown in the register maintained under the provisions of the Companies Act 1967 (as amended by the Companies Act 1982) of Great Britain if the Company were subject in the provisions of that Act.

(A). The provisions of Sections 50 and 51 of the Companies Act 1948 of Great Britain Jother than the penal provision applicable having regard to Section 419 of that Act, shall apply to the allotment of Shares in pursuance of this Prospectus preliminary expenses of the Company and the expenses of the luttial acce (including the application to The Stock Each are estimated to amonot to the equivalent of U.S. \$190,000. They are psycholo by the Company, but will infinitly be born a and charged in the Company in five amoual installments.

(to) The minimum amount which, in the opinion of the Directors, must be raised in order to provide for the matters referred to in purupnish 4 of the Fourth Schedule to the Companies Act 1948 of Great Britain, is the equivalent of U.S.\$1,000,000 (the whole of which must be raised by the initial issue) made up as follows—

(ii) Preliminary expenses, U.S.5190,000 (or the equivalent thereof);

(ki) Repayment of moneys borrowed for the foregoing, nil; and. (iv) Working capital, U.S.\$810,000 (or the equivalent thereof).

In the event that the amount raised by the initial offer is less than the equivalent of U.S.\$1,000,000, no Shases of any class will be issued and all application moneys will be returned by 15th May, 1964. [n] Peat. Marwick, Machell & Co. have given and have not withdrawn their written consent to the issue of this Prospectus with their report included in the form and context in which it is included.

cuments delivered for registration with copies of this Prospectus to the Registrar of Companies in England were the consen swick, Mitchell & Co. and copies of the Material Contracts described below. 12 MATERIAL CONTRACTS

The following contracts have been entered into prior to the date of this Prospectus and are material:

wang counters here been entered into prior to the date of this Prospectus and are material:

Management Agreement dated 6th April, 1984 between (1) the Company and (2) M. M. Rothachild Asset Management (C.L.)

Limited whereby the Company appointed N. M. Rothachild Asset Management (C.L.) Limited (the "Manager"), subject to the overall supervision of the Directors, with powers of delegation, to manage the Company assences, Investments and administrative affairs, to act as its Registrar and Secretary and to distribute and propose the distribution of States for a monthly fee in respect of each Carrency Fund at the rate of 0.75 per cept. Fer annum of the value of the net asteets comprised within each:

Carrency Fund, together with reimbustement of its out of prefer of present in selection to its services to the Company. The Agreement contains provisions indexinallying and enempting the Manager from Bability and due to its frand or negligitate is certain circumstateurs. For the purposes of carrying not its duries under the Agreement, certain of the functions, duries, powers and discretions of the Directors are carresiable by the Manager in the event of the termination of the Management Agreement, these functions, duries, powers and discretions would rever to the Directors. The Agreement may be terminated by, inter-alm, not less than one much 's notice in writing given by either party to the other.

Custodian Agreement dated (fit Agril, 1984 between O) the Company (7) the Manager and (7) M. M. Postachile & Company (7) the Manager and (7) M. M. Postachile & Company (7) the Manager and (7) M. M. Postachile & Company (7) the Manager and (7) M. M. Postachile & Company (7) the Manager and (7) M. M. Postachile & Company (7) the Manager and (7) M. M. Postachile & Company (7) the Manager and (7) M. M. Postachile & Company (7) the Manager and (7) M. M. Postachile & Company (7) the Manager and (7) M. M. Postachile & Company (7) the Manager and (7) M. M. Postachile & Company (7) the Manager and (7) M. M. Postachile & Company (7

Custodian Agreement dated 6th April, 1984 between (1) the Company (2) the biamager and (3) N.M. Rothschild & Som (C.J.)
Limited (the "Custodian") whereby the Custodian was appointed as the Custodian of the Company's assets. The Agreement contains provisions indemnifying and exempting the Custodian from liability not due to its fraud or negligence in certain circumstances. The Agreement may be terminated by, inter afia, not less than one month's notice in writing given by the Company to the Custodian or vice versa.

13 DOCTMENTS AVAILABLE FOR INSPECTION

Copies of the following documents may be inspected during the usual business hours on any weekday (Saturdays and public holidays excepted) at the offices of the Manager in Guerusey, and at the offices of Linklaters & Paines, Barrington House, 59-67 Gresham Street, Loudon ECZV 71A, up to sod including 30th April, 1981:—

the Memorandum and Articles of Association of the Company; the Material Contracts described above;

the Macrial Contracts described showe; the report and consent of Peal, Marwick, Mitchell & Co. referred to above; and the Companies Law Cap. 22 of the Cayman Islands as amended, under which the Company was registered.

APPLICATION PROCEDURE

Application may be made either by telex in the form set on below or on the Application Form. Investors are advised to apply by telex wherever possible to avoid delay in the allouncut of their Shares. An Applicant may make a remittance in any of the currences (except Japanese year) issued below, as desuited in "Foreign Exchange. Transactions" above.

The Company reserves the right to reject any application in whole or in part, in which event the application moneys or any balance will be returned by post at the risk of the Applicant.

In order to be allotted Shares in the initial office, a refer in the form sat and below must be received by the Common than 18.00 a.m. on 38th April, 1984. Payment for the Shares must be made to the inpropriete Correspondent for before 2nd May, 1984.

before 2nd May, 1984.

Thereafter, teles applications may be muste on any business day in Cuermany (*Desling Day*). Payment must be made to the appropriate Correspondent Bank of N. M. Rothechild & Sons (C.1.) Limited on or before the Sectlement Day which will normally be two business days after the Dealing Day. For this purpose, business days after the Dealing Day. For this purpose, business days on which business are not in the financial centre for the currency to which the Shares applied for are designated and, if your reminister is to be in a difference currency, in the financial centre for that currency also. The appropriate Correspondent Bank is that for the currency of your reminister.

Your application tales to the Company should be in the following form-

"To Old Court Currency Fund Limited, clo N. M. Roundhild Asser Management (C.I.) Limited, Guernsey, Channel Islands." Telex Nos. 4191673 or 4191507:

I/Wa apply to invest in (state currency class) Shares of Old Court Carrency Fund Distinct, subject to its Mem.

For this purpose Dwe have instructed (taste name and address of your hard) to result (state currency amount) to (state name of Correspondent Bank, city and acrowin number") for the account of "N. M. Rothschild & Sons (C.1.) Limited to Old Court Correspondent Court (State Sentement Day).

We declare that the State Sentement Day). Final Limited on (sain Seniernet Day).

1/We declare that the Shanes are not being acquired directly or indirectly by a U.S. person on no in violation of any applicable law and that they will not be council beneficially by a raidbant of Gastrasty, Aldernacy or Herm.

I/We request that Shares be registered in the name of (some name and address) and the certificate sent to (some name and address). From (state name, address, telephone and teles no. of Applicant)."

"A list showing details of the Correspondent Banks and account runibers in he work for the various currenter is set out below.
"If you are unable in make this declaration, you may still be able in cartain electromismeet in make the for Shores, but you should constant the Manager for destills first: "U.S., person," orcludes or national or resident of the United States of America, a partnership organized or existing in any state, territory or pactession of the United States of America or of any state, territory or postession thereof, or any estate or trust, other than on estate or runs the income of which from sources outside the Hestied States of America (which is not effective) transacted which the conduct of a mode or histories visitin the United States of America (which is not effective) the composes of some first the income for the purposes of some papers of this definition. "United States of America" packades the United States of America, in territories, postessions and areas subject to its paradiction."

If you apply on the Application Form payment should be by cheque in favour of Old Court Carreincy Fend Limited. It should be noted that cheques particularly for currencies other than Sterling will take a long time to clear, and applications will not be dealt with until the Dealing Day on which notification is received from the Company's bankers that the cheque has been cleared. Accordingly, Shares will not be allotted in the initial offer in respect of written applications unless the accompanying cheque has been cleared by 10.00 a.m. on 30th April, 1984.

Advice Notes will be sent to Applicants or their Agents though details of the transaction. Any investor who has not given the necessary status and residence declaration will be required to complete and return to the Company within one mouth a copy of the Advice Now which includes such a clearation and registration particulars. Shares, although allotted, will not setually be stand byfore the Company has received a satisfactory declaration. If no declaration is received within one mouth after the Dealing Day the Company any caucal the

The Correspondent Banks of N. M. Rochschild &	Sons (C.I.) Limited for receipt or payment of subscription and redemption moneys are:
CURRENCY	CORRESPONDENT BANK ACCOUNT
Austrahen Dollars	The Australian and New Zealand Banking Group. Royal Bank Branch, 287 Collins Street. Melbourne. Victoria, Australia. N. M. ROTHSCHILD & SONS (C.I.) LIMITE! ACCOUNT No. 70-0474
Financial Belgian Francs	Banque de Commeror, S.A. Foreign Department, 5U/51 Avermo des Arts, B-1640 Brussels, Belgina. N. M. ROTHSCHILD & SONS (C.1:) LANGTEZ ACCOUNT No. 092.610.2097400.5
Canadian Dollars	The Bank of Nova Scotta, 44 King Street West, Tonorso, Outario, Carisla, MSH IHI. N. M. ROTHSCHILD & SONS (C.I.) LIMITE! ACCOUNT No. 2447-1
Danish Kroner	The Chase Manhatian Bank, N.A. Yout Boks 2075-OK-1013, Copenhagen-K. Denmark. N. M. ROTHSCHILD & SONS (C.I.) LIMITET ACCOUNTNE. 6143-60207
Deutschemarks	Chese Bank, A.G., Headquarters, P.O. Box 4428, Tunnusinkief II. 6008 Frankfurt/Main, Weg Germany. N. M. ROTHSCHILD & SONS (C.1.) LIMITEE ACCOUNT No. 621-12-023*
Dutch Guilders	Nederlandre Credierbank, N. V., Herengracht (S8, P.O. Box 941, Aussterdam, The Notherlands, N. M. ROTHSCHILD & SONS (C.I.) LIMITEE ACCOUNT NO. 22.61.87.63
French Francs	The Chase Manhattan Bank, N.A. 41 Rue Cambon, 75001 Paux, France. N. M. ROTHSCHILD & SONS (C.L.) LIMITEE ACCOUNT No. 609.1.12659.
Hoog Kong Dollars	The Chise Markituan Bank, N.A., GPO Box 104, 280 Gioncester Road, Chineway Buy, Houg Kong, N. M. ROTHSCHILD & SONS (C. 1.) LIMITEE ACCOUNT No. 68-19-01855-
Italian Lire	The Chase Manhettan Bank, N.A. C.P. 1272, 2010) Milan, Piazza Media I. 2012L Milan, Italy, N. M. ROTHSCHILD & SONS (C.L.) LIMITEE ACCOUNT No. 601,003&X.
Japanese Yen	In order to comply with Japanese Ministry of Finance requirements the subscription and redemption moneys of the Japanese Yen Class of Shares can only be paid in currencies other than yen.
Sugapore Dollars	The Chase Munhatest Bank, N.A., Private Main Bag 3072, Specific Way, Singapore 1, Singapore. Private Main Bag 3072, Specific Way, Singapore 1, Singapore. ACCOUNT No. 121-09210-
Sterling	National Westminster Bank PLC, 35 High Street, St. Peter Port, Guerraey, Channel Halands. N. M., ROTHSCHILLD & SONS (C.1.) LIMITEE ACCOUNT No. 6707650
Swiss Francs	Chese Manhattan Bank (Switzerland), 63 Rue du Rhone, 1204 Geneve, Switzerland, N. M. ROTHSCHILD & SONS (C.I.) LIMITED ACCOUNT No. GAT 964 877
United States Dollars	The Close Manhatton Bank, N.A., I New York Plaza, New York New York 1008t, U.S.A. N. M. ROTHSCHILD-& SONS (C.I.) LIMITED ACCOUNT No. 001-1-9 48312

Dated 6th April, 1984 APPLICATION FORM To: Old Court Currency Fund Limited, c/o N. M. Rothschild Asset Management (C.L.) Limited,

United States Dollars

Telephone: Guernsey (0481) 26741 & 26331 Telex: 4191673 & 4191507 I/We hereby acknowledge that I/we have received and considered a Prospectus relating to Old Court Currency Fund Limited and that this application is made on the turns thereof and subject to the provisions of the Memorandum and Articles of Association of Old Court

P.O. Box 242, St. Julian's Court, St. Peter Port, Guerney, Cl

I/We apply to invest in the classiciasses of Share(s) in Old Court Corrency Fund Limited indicated below (See Note (1) below). Hong Kong Dollars

(Set Note (2) below) psyable to Old Court Currency Fund Limited. I/We request that the Shares be registered in my/our name(s).....

I/We hereby declare that the Shares are not being sequired directly or indirectly by a U.S. person (See Note (3) below) nor in violation of any applicable law and that they will not be owned beneficially by a resident of Guernacy, Addenney or Herm. ould complete the sections provided below and if there are joint Applicants all must sign. The application form many surfaces and Agent of the Applicant 5]. An Advice Note giving details of the transaction will be sent to the first na

(PLEASE USE BLOCK LETTERS)

2 Name of Applicant (in full) 1.0 Name of Applicant (or trill). 4 Name of Applicant (in full) 746

I'we elect for all dividends that may be declared or paid on may Shares held by motus from time to be paid to N. M. Rothschild & Som (C.I.) Limited for mysour account and subsequently to be retrevisted in faither Shares of the more class. Please provide metal with details ofKidde

A.ex

".CSE

Investment by periodic standing order payments subject to a minimum payment of £300 (or its curroncy equivalent) in set

The Currency Advice and Management Service as set out above.

NOTES

(1) Applicants wicking to haves in a single class of Share should place on "X" in the relevant box. Applicants wishing to invest in more than one class of Share should bullease in the relevant boxes the percentage of their total invasionates to be made in each class of Share.

(2) Psyment may be made in any of the committee (except Japanese yet) Band above.

(3) "U.S. person" includes a national or resident of the United States of America; a persuastion or gravitated or existing in any state, acriticary or personation of the United States of America, a corporation or expension of the United States of America is excited under the last include States of America or of any state, incritory or personation shareof, or any astate or trust, other than on extent or press the income of which from scatter or obtained States of America (which is not offered with the Conduct of a United States of America (which is not offered States of Conduct or on the Conduct of States of America. For the purposes of this definition." United States of America. Include the United States of America, but the United States of America. Include the United States of America, but the United States of America. Include the United States of America, but remiddies, possessions and greet subject to or juminiscion.

If you are maddle to make this declination, yet may still be able to cannot be examinated to produce the States, but you should contact the Manager for details first.



Company and associated

company

The Hongkong & Kowloon Wharf & Godown Company, Limited

Announcement to shareholders

1983 GROUP RESULTS

The Board has decided that the financial year end of the Company be changed from 31st December to 31st March so as to be coterminous with that of World International (Holdings) Limited of which this Company is a 45 percent owned associate. Due to such a change, the results of the Company for the fifteen-month period from 1st January, 1983 to 31st March, 1984 are expected to be released in July 1984 and the Annual General Meeting of the Company is now scheduled to be held in September 1984.

The unaudited total profit of the Group for the twelve months ended 31st December, 1983 increased by 23.3 percent from HK\$541.3 million for the corresponding period last year to HK\$667.6 million. Group profit attributable to shareholders, after taxation but before extraordinary items, amounted to HK\$425.4 million for the twelve mooths ended 31st December, 1983, compared to HK\$382.0 million in 1982, an increase of 11.4 percent. Earnings per share improved by 10.1 percent from 24.8 ceots to 27.3 cents. In addition extraordinary items totalling HKS 242.2 million (HK\$159.3 million in 1982) contributed to the profits arising from the sale of the Group's share in the West Point joint venture and from the sale of part of our

Second Interim Dividend A first interim dividend of 4.9 cents per share was paid in November 1983. With the change of the Company's financial year end date to 31st March, the Board has now declared a second interim dividend of 13.0 cents io respect of the fifteen-mouth period ended 31st March, 1984, payable on 20th June, 1984 to shareholders on record as at 8th June, 1984. The Register of Members will be closed from 5th June, 1984 to 8th June, 1984, both days inclusive. Io order to qualify for the second interim dividend all qualify for the second interim dividend all transfers, accompanied by the relevant .

ioterest in Hotel Marco Polo Limited,

Singapore.

share certificates, must be lodged with the Company's Registrars, Central Registration
Hong Kong Limited, not later than 4.00 p.m.
on 1st June, 1984. A final dividend will be
proposed when the Audited Accounts for
the fifteen-month period ended 31st March,
1984 are applied in Lat. 1984. 1984 are available in July 1984.

Highlights of Group's activities

Harbour City Phase IV was completed on schedule and at present over 72 percent of this phase is let. The Group's other commercial/residential properties remained at over 96 percent let throughout the year. The Group's billion dollar Harbour City Complex has been completed without additional borrowings. The Group enjoys a very strong financial position with net deposits and bank balances of HK\$275

million at 31st December, 1983. ● The downturn in the Hong Kong hotel industry in the second half of 1982 continued into the first half of 1983, however, a rapid rebound in the latter part of 1983 resulted in the profit of Harbour Centre Development Limited, the Company's hotel subsidiary, for the twelve-month period ended 31st December, 1983 being only slightly lower than in 1982.
However, the results of Hotel Marco Polo Limited, Singapore were adversely affected by an oversupply situation in the Singapore hotel industry.

●The Company's warehouse and cargo handling activities were affected by an oversupply of warehouse space in Hong Kong which made marketing conditions very difficult, however, occupancy in our 2.6 million square feet of lettable area has remained at high levels.

 HongKong Tramways and Star Ferry both suffered a decline in passengers, but the fare revision enabled Star Ferry to produce increased returns while HongKong Tramways produced increased returns as a result of reductions in expenditure.

Sammary of Results	Twelve months to 31st December 1983	Twelve months to 31st December 1982
G	HKSM	HKSM
Group profit before taxation Taxation	513.8 48.6	491.5 61.3
Group profit after taxation Minority interests	465.2 39.8	430.2 48.2
Group profit before extraordinary items Extraordinary items	425.4 242.2	382.0 159.3
Group profit after extraordinary items	667.6	541.3
Earnings per share, before extraordinary iten	is 27.3 cents	24.8 ceots
Dividends per share	17.9 cents	16.0 cents

OVER-THE-COUNTER

Stack	Sales (Hods)	High Low Last C	Deng	Stock	Sales (Hods)	High	لتحا عمز	(3mg)	•
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By: Citibank, N.A. (CSSI Dept), Agent Bank CITIBANG

All of these securities having been sold, this announcement appears as a matter of record only:



\$400,000,000

The Chase Manhattan Corporation

Floating Rate Subordinated Notes Due 1996

Interest on the Notes is payable quarterly on Interest Payment Dates in February, May, August and November of each year commencing August 3, 1984. Interest on the Notes for each quarterly period will be ½ of 1% per annum plus the arithmetic mean of London interbank offered quotations for three-month Eurodollar deposits prevailing two New York Business Days before the beginning of each Interest Period (subject to a minimum rate of 8½% per annum). Interest payable on the Notes on each Interest Payment Date will be payable in shares of Common Stock of the Company to the extent that such interest is payable at the rate of 8½% per annum, If interest is payable at a rate in excess of 8½% per annum, such excess will be payable in cash. Unless a holder elects otherwise, shares paid as interest are to be automatically sold so that the holders will receive the full amount of their interest in cash.

Lehman Brothers Kuhn Loeb

Goldman, Sachs & Co.

Merrill Lynch Capital Markets

Salomon Brothers Inc

Smith Barney, Harris Upham & Co.

L. F. Rothschild, Unterberg, Towbin

E. F. Hutton & Company Inc.

Dean Witter Reynolds Inc.

Prescott, Ball & Turben, Inc.

Tucker, Anthony & R. L. Day, Inc.

McDonald & Company

The First Boston Corporation

A. G. Becker Paribas Kidder, Peabody & Co.

M. A. Schapiro & Co., Inc.

Blyth Eastman Paine Webber Prudential-Bache

Shearson/American Express Inc.

Craigie Incorporated

Alex. Brown & Sons Moseley, Hallgarten, Estabrook & Weeden Inc.

Thomson McKinnon Securities Inc.

Oppenheimer & Co., Inc.

initiated this transaction and

Chase Manhattan Capital Markets Corporation acted as financial advisor to the issuer.

Anglo American Investment Trust Limited

Praliminary Profit Announcement and Balance Sheet and Notice of Final Dividand on the Ordinary Shares

Subject to final audit, the income statement for the year ended March 31 1984 and the balance sheet at that date, are as follows:

Income Statement

		pany
	1984	1983
many and the state of the state	R million	R million
Dividend from essociated company	39.3	36.7
Income from investments	20.3	23.1
Interest earned	0.7	1.5
	60.3	61.3
Administration and other expenses	0.9	0.9
Profis before taxation	59.4	60.4
Taxacion	0-3	0.7
Profit after taxation	59.1	59.7
Preference dividends	0,3	0.3
Profit ascributable to ordinary shareholders before share of		
retained profit of associated company and extraordinary item	8.82	S9.4
Retained profit of associated company	105.3	75.7
Profit before extraordinary item	164.1	135.1
Share of associated company's extraordinary item	1.6	(4.0)
Autor distance	365.7	131.1
Ordinary dividends:		131.1
Interim No. 87 of 150 cents per share	35.0	15.0
Final No. 88 of 440 cents par share	44.0	44 0
	59.0	59.0
Retained profit	106.7	72.1
Transfer to non-distributable reserve	106.9	71.7
	(02)	0.4
Unappropriated profit, March 31 1983	4.9	4.5
Unappropriated profit, March 31 1984	4.7	4.9
Earnings per ordinary share:		
Excluding share of retained profit of associated company—		
rents	288	5 94
Including share of retained profit of associated company—		
cents	1 641	1 351
Dividends per ordinary share—cents	590	590
Data-sa Chart	C	4
Balance Sheet	Company and	
		pany
	1984	1983
	1984 R million	1983 R million
Capital	1984 R million 10.0	1983
Non-distributable reserve	1984 R million 10.0 675.6	1983 R million 10.0 438.8
Capital Non-distributable reserve Distributable reserves	1984 R million 10.0	1983 R million 10.0
Non-distributable reserve	1984 R million 10.0 675.6 79.5	1983 R million 10.0 438.8 79.7
Non-distributable reserve	1984 R million 10.0 675.6 79.5 765.1	1983 R million 10.0 438.8
Non-distributable reserve Distributable reserves	1984 R million 10.0 675.6 79.5	1983 R million 10.0 438.8 79.7
Non-distributable reserve Distributable reserves Represented by:	1984 R million 10.0 675.6 79.5	1983 R million 10.0 438.8 79.7 528.5
Non-distributable reserve Distributable reserves Represented by: Investment in associated company	1984 R million 10.0 675.6 79.5 765.1	1983 R million 10.0 438.8 79.7
Represented by: Investment in associated company Listed—Market value R959.4 million (1983; R8S0.4 million)	1984 R milflon 10.0 675.6 79.5 765.1	1983 R million 10.0 438.8 79.7 528.5
Represented by: Investment in associated company Listed—Market value R959.4 million (1983; R850.4 million) Other investments	1984 R million 10.0 675.6 79.5	1983 R million 10.0 438.8 79.7 528.5
Non-distributable reserve Distributable reserves Represented by: Investment in associated company Listed—Market value R959.4 million (1983; R850.4 million) Other investments Unlisted—Directors' valuation R104.0 million	1984 R milflon 10.0 675.6 79.5 765.1	1983 R million 10.0 438.8 79.7 528.5
Represented by: Investment in associated company Listed—Market value R959.4 million (1983; R850.4 million) Other investments	1984 R milflon 10.0 675.6 79.5 765.1	1983 R million 10.0 438.8 79.7 528.5
Non-distributable reserve Distributable reserves Represented by: Investment in associated company Listed—Market value R959.4 million (1983; R850.4 million) Other investments Unlisted—Directors' valuation R104.0 million	1984 R milflen 10.0 675.6 79.5 765.1 752.0	1983 R million 10.0 438.8 79.7 528.5 515.3
Non-distributable reserve Distributable reserves Represented by: Investment in associated company Listed—Market value R959.4 million (1983; R850.4 million) Other investments Unlisted—Directors' valuation R104.0 million	1984 R milflon 10.0 675.6 79.5 765.1	1983 R million 10.0 438.8 79.7 528.5
Non-distributable reserve Distributable reserves Represented by: Investment in associated company Listed—Market value R959.4 million (1983; R850.4 million) Other investments Unlisted—Directors' valuation R104.0 million	1984 R milflen 10.0 675.6 79.5 765.1 752.0	1983 R million 10.0 438.8 79.7 528.5 515.3
Represented by: Investment in associated company Listed—Market value R959.4 million (1983; R8S0.4 million) Other investments Unlisted—Directors' valuation R104.0 million (1983; R78.9 million) Current assets:	763.6	1983 R million 10.0 438.8 79.7 528.5 515.3 11.6
Non-distributable reserve Distributable reserves Represented by: Investment in associated company Listed-Market value R959.4 million (1983: R850.4 million) Other investments Unlisted-Directors' valuation R104.0 million (1983: R78.9 million) Current assets: Debtors	1984 R milflen 10.0 675.6 79.5 765.1 752.0	1983 R million 10.0 438.8 79.7 528.5 515.3
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On April 12 1984 a final dividend (No. 88) of 440 cents per ordinary share (1983: 440 cents), for the year ended March 31 1984, was declared payable on June 8 1984 to shareholders registered in she books of the company at the close of business on May 11 1984. This dividend, together with the interim dividend of 150 cents per share declared on October 6 1983 makes a total of 590 cents a share for the year ended March 31 1984 (1983: 590 cents).

The ordinary share transfer registars and registers of members will be closed from May 12 to May 25 1984, both days inclusive, and warrants will be posted from the Johannesburg and United Kingdom offices of the transfer secretaries on or alout June 7 1984. Registered shareholders paid from the United Kingdom will receive the United Kingdom currency equivalent on May 14 1984 of the rand value of their dividends (less appropriate taxes). Any such shareholders may, however, elect to be paid in South Afritan currency provided that any such request is received at the offices of the company's transfer secretaries on or before May 11 1984.

The effective rate of non-resident shareholders' tax is 14.8376 per cent. The dividend is payable subject to conditions which tan be inspected at the head and London offices of the company and also at the offices of the company's transfer secretaries. Consolidated Share Registrers Limited, 1st Floor, Edura, 40 Commissioner Street, Johannesburg 2001 and Charter Consolidated P.L.C., Charter House, Park Street, Ashford, Kent TN24 8EQ.

> ANGLO AMERICAN CORPORATION OF SOUTH AFRICA LIMITED 5ecretaries per: D. M. Davidson

44 Main Street Johannesburg 2001 London Office: 40 Holborn Viaduct London ECIP IAJ

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GOPENG BERHAD

(Incorporated in Malaysia under the Companies Act 1965)

Authorised

M\$20,000,090

Shares of M\$0.50 each

Issued and fully paid M\$7,975,768.50

The Council of The Stock Exchange has admitted all the shares of M\$0.50 each in Gopeng Berhad to the Official List. Approval for listing has also been granted by The Kuala Lumpur Stock Exchange. Particular and the Computer of the Stock Exchange. lars relating to the Company are available in the Extel Statistical Services and copies may be obtained during normal business bours on any weekday (Saturdays and public bolidays excepted) up to and including 30th April, 1984, from:

Baring Brothers & Co., Limited 8 Bishopsgate London EC2N 4AE

Foster & Braithwaite 22 Austin Friars London EC2N 2BU

April, 1984



London and Manchester Group plc

Extracts from the statement by the Chairman, Mr H L K Browne, F.C.A., on the Group Report and Accounts for 1983

1993 was a year of significant progress for the Group. New business increased at a rate greater than that experienced for some years and plans for the development of the Group's structure and the rationalisation of the senior executiva functions were implemented. I am therefore abla to sound a note of optimism for the future in spite of Budgat changes to which I rafer later in my statement, although it has to be recognised that the Group's recent achievements could be largely negated if there were a return to the high rates of infletion and financial instability which heve marked much of the last decede.

On behalf of your Board I would like to express appraciation of the hard work and dedication of management and staff which has so effactively contributed to the Group's recent progress.

In July 1993 I was very pleased to walcome Mr. Hugh Jankins and Mr. Jeremy Leigh Pamberton as non-executive directors. With their appointment I feel that the Group has gained invaluable experience, Mr. Jankins being the senior investment executive of one of the country's laading pansion funde end Mr. Leigh Pemberton heving en outstanding record in a high quality manufacturing company of international status.

Profit and Loss Account and Dividend from the life funds from the bean received by transfera of £3.266,000 from the life funds of London and Manchester Assurance and £950,000 from the investmant trust retirament annuity fund. In addition investment income increased from £1,056,000 to £1,157,000.

Aftar setting off the general branch loss of £245,000 and the expenses of management end taxation there remains a balance of £4,683,000 which has anabled your 80erd to recommend a finel dividend of 11.48p per ehera (1982 9.31p). This, together with the interim dividend of 4.97p per share paid in November 1983, makes a total of 16.45p per share (1982 13.65p), After providing for these dividends the balance carried forward has been increased by £911,000.

The Insurance Market

An important feeture in the insurance market in 1983 was the introduction of a new system for tex relief on mortgage interest (MIRAS) which enhanced rhe attraction of life policies as a means of rapayment. The new business figuree for the industry as a whole benefited from this change and I am pleased to say that the performance of both the home service and life broker divisions in this respect compares well with that of the Group's competitors.

Shereholders will be ewere of the proposele to regulate commission payments under the Registry of life assurence commissions (ROLAC). Whilst your 80ard believes in a reaponsible epproach to the levels of commissions paid to intermediaries, it rakes the view that auch commissions are only part of the total acquisition costs and that therefore a life office should anher be free to pay commissione having regard to volumes of business and the sarvica given by intermedianes, or that total ecquisition costs should be controlled.

The home earvice division remains the meior profit centre within the Group. The industrial brench sector has made progress both in the growth of new business end in the control of the quality of that business. The result hee been an overall increase in premium income well in excess of the current rate of inflation. The ordinary branch experienced a quite outstanding year, largely as a result of MIRAS.

Life Brokar Division Both annual and single premium business showed strong growth In 1983 in this relatively new division. Linked annual pramium business was 119 per cant in excess of 1982 lavels, whilst with the benafit of MIRAS conventional business increased by 152 per cant over tha comparative figure, Single premium policies continued to attract attention, naw business being mora than twice that of the previous yeer.

Pensions Division The results of this division elso comfortably exceeded those of 1992, In tha important erea of group pensions, new business moved against market trands with annual premiuma 58 per cent higher than the praceding year end singla premiums up by 36 per cent. The Combina Plan, a unique group pension plan designed to offer the benafits of a final salary schame with the early leaver advantages of money purchase, and Trensplan, another major product innovation for the job mover, both performed well.

1983 elso saw the successful launch of a Managed Funde contract marketed by the new insurance company within the Group, London and Manchester (Menaged Funds) Limited end, with this, the foundation now exists for expansion in this important sector of tha amployee benefit market.

General Branch An attractive new motor policy and more flexible means of premium payment were introduced during the year. Gross premium income rose by 10 per cent, but claims, with a marked increese in the provision for theft, continued to reflect the generally poor experience of the industry

Bearing in mind the benefits to the home service division of having general branch policies to market elongside the life business, your Board considers that the loss of £245,000 is not unreasonable, although avery effort will continue to be made to Improve the position.

Throughout the world there have been signs that the long-awaited economic recovery has at last started. As an often before, this move has been led by the United States where the strength of the upturn during the first half of 1983 surprised most economic commentatora. Because of the Improved business prospects stock markets everywhere

were buoyant. For a UK investor, the strong performance of overseas markets was rainforced by the weakness of sterling whilst the domestic equity market also continued to move ahead. Full advantage of these movemants was taken with a nat investment by the main life funds of £18.9m

were not ignored and £12.1m was invested in gilts and other fixed interest securities to take advantage of the high rates of real return availabla. Naw property purcheses were again concentrated in the retail sector end after allowing for sales of some properties no longer appropriate for the portfolio, a further £6.5m was invested during

1983 was a busy year for corporate activity amongst investment trusts; 8 roadstone, Dominion & General and Scottish Ontario were unitised, aeveral mergers took place, while British Industries & General and Moorside ware takan over by companies outside the sector. As shareholders in many of these trusts, Group companies benefited from the changes, and in a number of cases played an active role in initiating or supporting the moves in the interests of policyholders. Nevertheless, holdings in investment trusts totalling £177m still represent a larga part of several portfolios within the Group. The maintenence of a thriving investment trust sector is therefore of the utmost importance and I welcome the steps taken by some management groups to improve their public image as well as their investme performance. Such initiatives can only result in greater support for the sector from ell types of investor.

Linked life assurance performed very strongly during 1983 with the total funds increasing by £33.5m to £112.6m. It was particularly pleasing to note that the Investment Trust Fund (holding £60.8m of policyholdera* money) was the Group's best performing fund with an increase in unit price of 37.3 per cent during the yeer, compared with e rise of 34.7 per cent in the FT Actuaries' Investment Trust Index.

Mortgega lending is now undertakan on a variable rate basis, financed by axternal borrowing. This activity is being transacted through an essocieted company, London and Menchestar (Mortgeges) Limited, in which the Group hase 50 per cent interest. The new echema has proved very auccessful with advances exceeding £25m including approximately £6.5m switched from existing fixed rate loans.

In the ordinary branch e reversionary bonus of £5.75 per cent of the sum assured has been declared compared with £5.50 per cent in the previous year. Industrial branch reversionary bonuses have also been

The rise in market values of assets over the year has resulted in subatentially higher terminel bonuses and this is reflected in increased transfers from investments ravaluation reserva, £4.0m to the ordinary life fund and £3.1m to the industrial life fund, totalling £7.1m, compared with £4.3m in the previous year.

Following the formation in 1981 of London and Manchester Group plc as the Group's holding company, your 8 oard has been giving attention to the development of an eppropriate structura for the Group's activities. As part of this exarcise an authorised insurance company, London and Menchestar (Managed Funds) Limited, and a unit trust management company, London and Manchester (Trust Managament) Limited, commanced business during 1983 as subsidiaries of the holding company. In addition, Walfare Insurance Company Limited, previously owned by London and Manchester Assurance, was transferred to the holding company with effect from 31 Decembar 1983. It is the opinion of your Board that this restructuring is in the interests of both policyholdars and sharaholders end will aignificantly assist the development of the Group in the years to come.

Share Capital and Borrowing Powers The personel savings market is becoming ever more competitive and the possibility of the Group pursuing opportunities for expansion into other savings-related activities has been given added significance by the ebolition of life assurance premium relief (LAPR). For this reason, and in order to give the Board mora flaxibility in meneging the Group's affairs, shareholders are to be asked to approve an increase in the authorised share cepital and the borrowing powers of the Board.

The Budget on 13 Merch withdrew LAPR from new business as from that date. This decision by the Chancellor has removed one of the incentives from saving through e life assurance policy and the effect will be to reduce the potential of some of the current renge of products

offered by companies in this market. Your Board believes that in taking a positive ettitude towards this change through the design of new products and in particular in emphasising a life assurance company's unique role in the savings industry it will still be possible to attract e considerable volume of business to the Group. The pansions and general branch marketing will be unaffected end indeed could be anhenced. Your Group's prosperity and performance will continue to be based on well designed products and an effective investment policy, backed by efficient administration and direction, to give e good service and financial return to policyholders and will not be materially affected by these changes. The life broker and pensions divisions continue to meet their planned business objectives and provided that business is maintained shareholders will soon see estisfactory profit figures amerging as a result of their achievements. Tha inharent growth of premium income and tha long term prospects in the home service division will benefit both from

the aconomic recovery and the LAPR edvantage that existing life buainess Will retain. Tha Group has a number of divisions which cen work within clearly defined plans towerds profit-centred business objectives and the structure now fits the overell corporate plan to which your Board has been working, with particular reference to the diversification introduced during the last thrae years. Opportunities for profitable axpansion end diversification will be tekan, providing these can be achieved on acceptable terms. Meanwhile it is clear that there is no lack of business to be written and that, providing the lower levels of inflation can be

maintained, this cen be serviced at an increasingly acceptable cost. The prospects for financial services in this country are good end your Group in UK equities, and £5m in overseas equities. Fixed interest markats wifi continua to take full advantage of any opportunity which may arise. The Annual General Meeting will be held on 4 May 1984. Copies of the Report, which includes the full text of the Chairman's Statement may be obtained from the Joint Secretary at Imperial House, Dominion Street, London EC2M 2SP.

> We are pleased to announce the formation of



Henry Ansbacher Inc.

Investment Bankers New York and London

277 Park Avenue, New York, NY 10172 (212) 688-5544

Christopher J.H.M. Shaw Managing Director

Paul Slater Managing Director

Laurence E. Levine Executive Vice President and Chief Operating Officer

William M. Whetzel Senior Vice President

April 2, 1984

Notice of Redemption

International Standard Electric Corporation

6% Sinking Fund Debentures Due 1987

NOTICE IS HEREBY GIVEN that, pursuant to the provisions of the Indenture dated as of May NOTICE IS FIRRED & GIVEN that, pursuant to the provisions of the societies as of May 15, 1967, under which the above described Debentures were issued, \$1,834,000 principal amount of the said Debentures of the following distinctive numbers has been drawn by lot for redemption on May 15, 1984 (the "sinking fund redemption date") through the operation of the Mandatory Sinking Fund provisions at 100% of the principal amount thereof (the "redemption price"), together with accrued interest to the redemption date: #1,888 COUPON DEBENTURES MEARING THE PREFIX LETTER M.
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1838 2410 3896 6344 8656 10496 14340 16684 19106 22059 24657 26765 28718 30839 32125 The Debentures specified above will become due and payable and, Upon Presentation and Surrender Thereof (with all coupons appertaining thereto; maturing after May 15, 1984), will be paid on said redemption date at Brokers' Services Department, 5th Floor of Cribank, N.A., 111 Wall Street, New York, N.Y. 10043, at the offices of Cribank, N.A. in London (City Office) and Paris, or at the principal offices of Societe Generale de Banque S.A. in Brussels, Dresdner Bank Aktiengesellschaft in Frankfurt, Credito Italiano in Milan, Swiss Bank Corporation in Basle, and Swiss Credit Bank and Union Bank of Switzerland in Zurich, as the Company's Paying Agents. On and after said redemption date, interest on said Debentures will cease to accrue. Coupons due May 15, 1984 should be detached and presented for payment in the usual manner.

International Standard Electric Corporation

By: CITIBANK, N.A.

This advertisement is issued in compliance with the requirements of the Council of The Stock Exchange. It does not constitute an invitation to the public to subscribe for or purchase any shares

J.P. STEVENS & CO., INC.

ntied liability in the State of Delaware in the United States of America.)

for issue at 9th April, 1984 18,669,812

J.P. Stevens & Co., Inc. (the "Company") is the second largest publicly owned textile company in the U.S.A. with sales of \$1.9 billion and total assets in excess of \$1 billion. The Company is a major producer of diversified textile products and is also one of the U.S.A.'s leading commercial printers, together with other interests in aircraft sales and maintenance and the production of elastomeric and plastic products.

Shares of Common Stock of U.S \$7.50 par value

including 401,696 shares reserved for issue

The Company has seventy-four textile manufacturing plants and nine major printing plants in the U.S.A. and interests in textile operations in Canada, England, Germany, France and New Zealand.

The Council of The Stock Exchange has admitted to the Official List all the 18,669,812 Shares of Common Stock of the Company issued and reserved for issue.

Particulars relating to the Company are available in the Extel Statistical Service and copies of such particulars may be obtained during usual business hours (Saturdays & public holidays excepted) up to and including May 4, 1984, from:

Chemical Bank International Limited

Rowe & Pitman

Chemical Bank House. 180 Strand, London WC2R 1ET

City-Gate House, 39-45 Finsbury Square, London EC2A 1JA

13th April 1984

40,000,000

WORLD STOCK MARKETS

NOTICE To the holders of GFC INTERNATIONAL FINANCE N.V. 101/2 % Guaranteed Debentures Due 1995

18.50

The annual financial statements of GFC International Finance N.V. and its parent, General Foods Corporation, for the fiscal year ended April 2, 1983, are avoilable for inspection at the offices-of the various Psying Agents during normal business hours.

Copies of these statements may be procured by written request to:

General Foods Corporation

General Foods Corporation 250 North Street RA-7N White Plains, New York 10625 Attention: Alan M. Shaver, Eaq. Corporate Secretary

Dated: April 13, 1984 GFC International Finance N.V.

> The Royal Bank of Scotland pic U.S.\$75,000,000 Floating Rate Capital Notes

due 1986 to 1994 For the three month period 16th April, 1984 to 16th July, 1984, the Notes will bear an interest rate of 111/6% per annum. Interest payable on 16th July, 1984

Bankers Trust Company

			· In	di	ces					ı
NEW	YOR	K .		M. TOM		٠.				
	Apr.	April	Apr	ADE	I'	11	84	Since (omplite	٠Į
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H'me Buds	68.00	68.18	68,16	68,11	88.45	(M1) 71.75	(5/4) 68,00		(2/7/82)	ı
Transport.	497.33	497;84	486,01	499,8	454,88		(15/4) 484,16	e12,63	12,52	İ
Údlities	125,34	128,25	125,48	125,4	125,24		(0/4) 123,70	(9/1/64)	10,5	ı
Trading Vot	99.62	96,530	80,280	78,990	71,570	(8/1)	(25/2)	20/4/62	K28/4/42	
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sugnati, je "	178,28	175.70	175,50	176,45	175,84	190,84 (9/1)	174,10 (22/2)	194,54	4.82	ı
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NEW YORK ACTIVE STOCKS Change										W(
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Redemption Notice

City of Oslo (Norway)
9% Sinking Fund External Loan Bonds due May 1, 1985

NOTICE IS HEREBY GIVEN, pursuant to Fiscal Agency Agreement dated as of May 1, 1970 under which the above described Bonds were issued, that Cathank, N.A., Fiscal Agent, has selected by lot for redemption on May 1, 1984 through the operation of the Sinking Fund, \$1,855,000 principal amount of said bonds at the Sinking Fund redemption price of 100% of the principal amount thereof, together with accrued interest to the date fixed for redemption. The serial numbers of the Bonds selected by lot for redemption are as follows:

	April 13	April 12	April	April 10	High 19	64 Low
AUSTRALIA All Ord. (1/1/80) Metals & Minis. (1/1/86)	784,6 548,5	781.7 547.6	758.2 540.2	756,6 641,5	787.4 (9/1)	718.6 (8,5) 488.6 (5,5)
AUSTRIA Gredit Alktien (2/1/62)	55,70	55.05	. 55 .00	55.07	56,21 (2/1)	55,50 (6:4)
BELGIUM Belgian SE (61/12/66)	154,42	154.05	163,61	751,88	154.42 /18/41	135,22 (4/1)
DENMARK Copenhagen SE (3/1/83)	195,82	(u1	181,58	181.02	225.11 (20(7)	178,53 (28/5)
FRANCE CAC General (11/12/67) Ind Tendance (50/12 63)	171.4 109.7	171,4 100,2	172.2 110,1	176.8 109.8	176.1 (25/1) 114.7 (25/1)	155,6 (0;1) 59,4 (8;1:)
GERMANY FAZ-Aktien (81/12/66) Commerzbank (1/12/56)	\$51.05 1928,4	847_44 1019_6	847.48 1018.1	845,61 1007,9	570,84 (2/2) 1096,6 (2/2)	\$41_1 (12:5) \$98,8 (12:5)
HONG KONO Hang Seng Bank(Fi/7/64)	1075,7	10\$1,41	1065,80	1986,12	1176,85 18/8)	871,08 (5/1)
TALY Banda Comm Ital, (1972)	$\overline{}$!			192,06 (2/1)
Nikkei-Dow (18/6/48) Tokyo SE New (4/1/68)	866,27	884.00	258,35	654,04	11,050_19 (2/4) 678,62 (2/4)	8850,47 (14/2) 735.45 (4·1/
NETHERLANDS ANP-CBS Osneral (1870) ANP-CBS Indust (1970)	180.8 187.9	159.5 128.8	158_6 128_6	154.8 128.2	178,9 (1/2) 147,2 (1/2)	156 S (25/2) 127.1 (27/5)
NORWAY Dalo 8E (4/1 88)	275.52	241,44	271,40	288.34	275,52 (15/4)	221,67 (4/1)
INGAPORE traits Times (1965)	1007,56	1005,09	1006,81	1002,50	1871,91 (8/7)	960,12 (28/6 i
SOUTH AFRICA Bold (1968) Industrial (1858)	1022,4 1058,2	1021_8 1052_2	1028,4 7056,8	1074.d 1055.9	1658.8 (6/5) 1165,5 (28/8)	782,T (24/1) 562,6 (25/1)
PAIN Radrid &E (RA/11/63)	118,25	116,51	118.51	116,77	120,48 (\$/5)	101,22 (6:1)
WEDEN accideon & P. (1/1/68)	:503.68	1502,48	1547, 17 1	541.58	1584_6 (8/2)	1,401.54 (4/1)
WITZERLAND WISSENKC pn.(61/12/88)	878. 1	571,1	371,2	\$70.1	588,7 (5/1)	360,0 (12/5)
/ORLD apital intl. (1/1/78)	_	188,50	188,6	185,0	196,8 (50/8)	178,2 (16/2)

** Saturdey April 7. Japan Nikkel-Dow 10,833.72. 7SE 849.81.

Base values of all Indices are 100 except Apriraits All Ordinary and Sertais—
500. NYBE All Common—50: Standard and Poors—10; and Toromo—1,000 the last named based on 1976. Faculating bonds, 2 400 industrials, § 400 industrials of the poors—10 of the poors

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Bovis wins £13m prison conversion

work within three years. Four repairs on six closes; a fourth cell blocks will be built to house the prisoners who will mainly be serving sentences of more than 18 months and the entire area work on two closes in South will be surrounded by a 17 ft high perimeter fence. Gaynes thigh perimeter fence. Gaynes Hall was opened as a Borstal in 1946 with room for 180 offenders but accommodation has since but accommodation has since \$129,433. become outdated.

JOHN BARKER CONSTRUCTION, 9 subsidiary of House of Fraser, has been awarded contracts worth £3.2m during March. These include the fitting ont of new premises at Reading, the external refurhishment of an existing building in North London for British Telecommunications and 9 oeries of other projects with the Property Services Agency and the Midland Bank.

HENRY BOOT BUILDING is to undertake the £3m refurhishment and upgrading of 6 detached seven-storey education facility in Lodge Road, London, for IBM on 9 management contract. Within the 45-week contract, the office block is to be almost entirely stripped ont, modifications and ungrading carried out tions and upgrading carried out to existing structures and essential services and the roof re-covered. Work includes the installation of double glazed curtain walling to the external face of the building, extensive mechanical and electrical works, rised floating and a high greed raised flooring and a high speed passenger lift as well as external works. Completition of the refurbishment programme is scheduled for November.

A sub-divisional police head-quarters will be built in Richmond Close, Halifax, under a figure contract awarded by West Yorkshire Metropolitan County Council to FAIRCLOUGH BUILDING, eastern division. The two and three-storey building of reinforced concrete column and remorced concrete column and slab construction will be largely stone-faced and roofed with natural siste to reiste to the traditional materials of the largely Victorian town centre. The project is scheduled for completion in December 1985.

rehabilitation work in Glasgow.
Queen's Cross Housing Association has asked Wiltshier to rehabilitate s close of eight flats
in Dalmally Street, Glasgow, for

Work is to start this summer on turning the Gaynes Hall Borstal institution at St Neots, Cambridgeshire, into a category C prison for 500 prisoners. The Government has awarded the building contract worth £13m to the EOVIS CONSTRUCTION CO who expect to complete the work within three years. Four cell blocks will be built to house

هكذا حدة النَّصل

Factory jobs for Mowlem

Factory building contracts mostly in the north-east worth £3.27m have been won hy the Hexham office of MOWLEM INDUSTRIAL. Three contracts have been awarded hy English Estates. The largest, worth £922,000. is for 35 advance factory units of 50,000 sq ft at the Airport Industrial Estate, Newcastle. Work is scheduled for completion in September. At Team Velley, Gateshead, Mowlem is to construct 41 factory units of 46,000 sq ft total area under an £866,000 contract. At Longbenton, near Newcastle, Mowlem has been awarded a £543,000 contract to build 15 advance factory units of 35,000 sq ft total overall. Other contracts include 17 workshops of 21,000 sq ft total overall. Other contracts include 17 workshops of 21,000 sq ft total overall. Other contracts include 17 workshops of 21,000 sq ft total area at Gateshead costing £380,000, for Peters Estates, and a £275,000 contract in Uxbridge, Middlesex, from Midas International Investments of Gateshead, for 12 workshops totalling 15,000 sq ft.

meter, and up to 7.2 metres deep, with associated manboles. The reinforced concrete column and slab construction will be largely stone-faced and roofed with natural slate to relate to the traditional materials of the largely Victorian town centre. The project is scheduled for completion in December 1985, the WILTSHIER SCOTLAND has won contracts worth £1.6m for rehabilitation work in Glasgow. some 315 metres is in tunnel, together with associated access shafts, manholes and ancillary works, to carry foul sewage, including industrial effect.

Quality construction and refurbishment Midlands & Thames Valley 021-704-5111

Wallis has £12m batch

G. E. WALLIS & SONS has won several contracts, worth £12m, including construction of Earth Sciences Building at Egham for the Royal Hollowey College, comthe Royal Holloway College, comprising laboratories, lecture theatres and seministrative offices (value £3.2m); the structural refurbishment of the Public Records Office, Chancery Lane (value £1.8m); two office developments at Chertsey and Guildford (value £1.4m); sheltered housing development at Swiss Cottage for the Humanist Housing Association (value £1.2m); 62 houses at Cymhran for Cwmhran Development Corp (value £1.2m); refurbishment of offices 6t Grosvenor House, Croydon, for Legal and General (value £1m); structural refurbishment of Patents Office refurbishment of Patents Office (value £0.5m).

A shopping centre development at Guildford heads contracts, together worth nearly film, awarded to TARMAC CONSTRUCTION. The #46m shopping centre has been awarded by White Lion Walk and is scheduled for completion within 16 months. Other contracts include a superstore, shops and car park at Erdington, Birmingham, for Greater Midlands Cooperative Society, worth #2m.

WALTER LAWRENCE CONSTRUCTION on behalf of the
GLC has been awarded a fim
design and hulid contract at
Parmiter Street, Bethnal Green,
London, E2. The development,
which will initially consist of
27 light industrial units covering
a total of 33,000 sq ft, will be
in facing brick and profiled sheet
cladding with curved eaves and
will combine 8 pleasing visual
effect with the practicality of 8
maintenance-free building style. maintenance-free building style. Work is due for completion in November 1984.

CONTRACTS AND TENDERS

AVIS B'APPEL B'OFFFRES INTERNATIONAL REPUBLIQUE DU MALI

ENERGIE DU MALI

L'Energie Du Mali (EDM) a obtenu un prêt de la Banque Mondiale poor financer l'électrification de plusieurs quartiers périphériques de Bamako et le renforcement du réseau MT.

1. OBJET DE L'APPEL D'OFFRES Le projet comprend 6 lots homogènes de fourniture et 2 lots d'exécution; il réalisere principalement les lignes aériennes MT et BT, le renforcement du réseau par câbles souterrains MT, les postes de trensformation montés sur poteaux et l'extension des

ACHAT DU DOSSIER Le dossier complet comprend 2 exemplaires de conditions gênérales, spécifications et tableaux de prix et 1 exemplaire des

il peut être obtenu suprès de MOTOR-COLUMBUS Ingénieurs-Conseils SA Projet MC 4688, Parkstrasse 27 CH-5401 Beden/Suisse CH-5401 Beden/Suisse contre paiement de 920 (neuf cent vingt) francs suisses. Los sociétés locales peuvent acquerir le dossier auprès de Energie Du Mali

Direccion Générele Square Petrice Lumumba, Boîte postale 69 Bamako/Meli

REMISE ET OUVERTURE DES OFFRES Les offres doivent parvenlr sous pli fermé à le Direction Générale de l'Energie Du Mali. Square Patrice Lumumba, Bamako, avant le 26 juin 1984, à 08.00 heures. Le mardi 26 juin i 10.00 heures II sere procédé i l'ouverture des offres à laquelle les soumissionnaires peuvent essister.

NORTHERN IRELAND GAS COMPANY

NATURAL GAS PROJECT PHASE I Applications are invited from suitably qualified Civil and Meehanical Engineering Contractora who wish to be considered for inclusion on a select list of tenderers for the construction of the above project.

The work comprises approximately 90 km of 450 mm dia. high pressure steel naturel gas pipeline with associated installations including a pressure reduction station and 2 km of medium pressure pipeline. The location of the line is from Balfast to the Northern Ireland/Republic of Ireland border.

Three separete contracts will be awarded, one for each of two longths of pipeline approximately 45 km long, and the third for the Belfast City Gate pressure reduction station together with approximately 2 km of medium pressure pipeline. The Conditions of Contract will be those of the I.C.E. Fifth Edition (June 1973) (Revised January 1979) with an award of contracts during the early part of March 1985 for completion by 30 August 1985. The fullest participation of Northern Ireland resources will

Applications are to include details of similar works (renge in value from 13m to 15m) undertaken during the previous 5 years stating value, location, type of work, the employing Authority and Engineer to whom reference may be made, together with the eurrent Board and Menagement structure and C.V.'s of key personnel, copy of the latest audited accounts and Group/Company organisation and any joint Venture proposals.

Application should be addressed to:
The Managing Director, Northern Ireland Gas Company Ltd.,
R.A.C., House, 79 Chichester Street, Belfast BT1 4RR.
for receipt not later than 30 April 1984.

PERSONAL

£500,000 Property lottery and £45,000 year income We are instructed to offer by lottery a PRIVATE PROPERTY

PORTFOLIO with a value in excess of £500,000

You can win the freshold property complete with an income in excess of £45,000 per year all for £190 per ticket

For tickets please make cheques atc payable to:

Dibb & Clegg, Solicitors

31 Regent Street, Barnsley, South Yorkshire 570 2HJ Complets details including conductors will be sent by return

COMPANY NOTICES

NOTICE OF RATE OF INTEREST CREDIT FONCIER DE FRANCE

U.S.\$75,000,000

in eccordance with the provisions of the inferest Determination Agency Agreement between Crédir Fencier de France and National Sank of Abu Dhabi, Parls Sranch, dated as of 18th September, 1981, notice is heraby given that the Rate of interest has been fixed at 11½ per cent car denum, and ther the Coupon Amount peyable on October 10th, 1984, against Coupon No. 6 will be US\$250.70 and that such ensum has been computed on the ectual number of days elapsed (183) divided by 360.

By: National Bank of Abu Dhebl Paris Syanch Reference Agent

12th April, 1984

BANCO DI ROMA INTERNATIONAL SA USSSO DO DOO GUARANTEED FLOATING RATE NOTES DUE 1987 EXTENDAGLE AT THE NOTENOLOGE'S OPTION TO 1991

tisnt to condition 6 (B) of five the 50,000 outstanding Notes 1,000 each will be redeemable , as from 30th April 1984, r which they will coase to bear Securet unmatured Coupons
such Notes.
The Principal Paying Agent
CREOIT LYONNAIS
Luxemboury

US\$75,000,000 Hydro Quebec 10% Debentures

due 15th May 1999

Debentures covering US\$2,000,000 have been purchased on the market to satisfy the Purchase Fund due 15th May 1984

CANADIAH PACIFIC SECURITIES G S MACLEAN Secretary

Hambros Bank Limited
Depository Receior to Bearer
C. ITOM & CO. LTD
SHARED OF YEN SO EACH

April 17, 1084

THE GRAZIL FUNO S.A.
lockedada on Investimento O.L. No. 1501 BEARER DEPOSITARY RECEIPTS
BORS Lisued by European Overseas
Issuing Corporation 5.A

DIVIDENO COUPON NO. 19 in No. 16 will be obysbia on April 5. Coupon No. 16 will be onvine un A. 1954 at these Manhattas Bask (N.A.)
Wootpale House, Coleman Street, London ECZP and
European Overtoas Issuing Corporation
11. boulevard Grande-Ouchesse Charlotte, Luxembourg November 1975 Issue USS144.9d per 1.000 Oepositary Shares USSI 449.80 oer 10.000 Depository Shares, less siny additional withholding tax that may be deductiola. This amount repre-sents the dividend of C.13.95 per share, less Grazilian withholding tax of 10°, sad the lepository's commission or 1 July 1977 Issua USS 141.76 oer 1.000 Oepos/tary Shares u.S.S1,S17.60 per To,ooo Depositary Stares of the control
SCHLPSINGER INTERNATIONAL FUND (LUXEMBOURG) 5.A. Registered Office: Luxembouro 14, rue Albringen R.C. Lux. 6, No. 13.142 CORRECTION OF NOTICE OF EXTRAORDINARY GENERAL MEETING OF SHAREHOLOERS In the Notice convening the Extra-ordinary General Meeting of the Com-hany at its registered office. Is rua Albringen, Luxembours, on 1875 April 1988 at 11 gricks am published on 9th April 1984, Post 19 of the Agrico 9th April 1984, Post 19 of the Agrico Station of the Com-hany of U.S.540.000.000 to be repre-sented by twenty million stares with pany of U.S.S.O.O.O.O.O. or be-served by twenty million sacres with some of the source of the source of U.S.S.C. eccl. and to the authorisation of the Gaad of Oriectors pour local wirrant to surface feet to sellutionents! Otherwise the names are semans uncassaged.

Oy Order of the Board of Oriectors

BRASCAN LIMITED The Annual Meeting of Shareholders of Bruscas Limited will be held ut the St. Lawrene Hall, 157 Kiso Street Fasi. Toronto. Canada on Wednesday asth April 1984 at 11.00 u m. Cooles of the Annusi Report. Notice of the Meeting and Proiles are availsole St. The Offices of the Meeting and Proiles are availsole of Othopsoale.

6 Othopsoale.
Loudon ECZN 4AE.

CLUBS

RAMON'S NIGHTCLUG RESTAURANT.
5.2. Desn Street, WI Warve today's qualnessamen car relax and enjoy an exclina
evenisg. Various cabaret acts rhroughout.
Chamming and discreet darking partners
available of an incentile 9 pm to 3 am.
01-437 9455.

On May 1, 1984 there will become due and payable upon each Bond selected for redemption the said redemption price, together with interest accrued to the date fixed for redemption. Payment of the redemption price of the Bonds to be redeemed will be made in such coin or Payment of the redemption price of the Bonds to be redeemed will be made in such coin or currency of the United States of America as at the time of payment is legal tender for the payment of public and private debts thereon, upon presentation and surrender of said Bonds, with all coupons appertaining thereto maturing after the date fixed for redemption, at the Corporate Trust Office of Citibank, N.A., Municipal Bond Processing Window, 20 Exchange Place, 16th Floor, New York, N.Y. 10043 and subject to applicable law and regulations, at the main offices of Citibank, N.A., in Amsterdam, Brussels, Frankfurt (Main), London, Milan and Paris, Payment at the offices of Citibank, N.A. in Europe referred to above will be made by check drawn upon a bank in New York City or by a transfer to a dollar account maintained by the payment at bank in New York City.

the payee with a bank in New York City.

On and after the date fixed for redemption interest on said Bonds will cease to accrue.

Coupons due May 1, 1984 should be detached from the Bonds and presented for payment in the

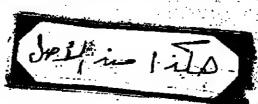
For the CITY OF OSLO (NORWAY)
CITIBANK, N.A.

April 2, 1984

as Fiscal Agent

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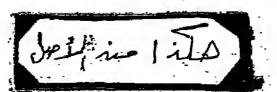
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FT LONDON SHARE INFORMATION SERVICE

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121 S. No. 161 Figures in parenthesis show RPI base month for Indexing, in the month's prior to issue RPI for August, 1963, 338.0 and for March, 1984, 345.1. INT. BANK AND O'SEAS	Stretcoats Point Last Div VTal	May App Fi 20 5234 billingred 6 4.0 6		April Oct Do. 10% Cov Pri 35mfv.4 2.5 6 10.2 10.2 11.5 bb.1 1.2 1.5 bb.1 1.5	May Oct. Duray Strom. 10p. 623 232 (74d - 4.0 - 8.5) 244 2.6 0.9 8.5(74d - 6.0 - 7.0
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15Feb 15Aug GLC 6 Apr. 1990-97 79 16.2 8.66 10 97 1 1Feb 1Aug Herts 6 Apr. 1985-87 895-4 2 7.54 10 51 1	West Parks Fit 10c 13 Q0c 2.3 6.1 7.2	May No Maskad J.J 10p 77 51 18 3.0 3.0 5 6 8 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	Mar. Oct. Newmark Louis	Nar. Aug Bassett Foods 147 1121 16.72 29 6.510.01 1 Feb. Sept. Batters Vort 10p 74 16.1 (2.4 4.4 4.6 5.3 1 Feb. Aug Batters Vort 10p 74 16.1 (2.4 4.4 4.6 5.3 1	an. June Feeder Agric. 10p. 27 14.11 1.15 1.6 6.1172 91 10p. 28 27 24.11 1.15 1.6 6.1172 91 10p. 28 2.117 2.0 5.0 0.8 6.02724 2.117 2.0 5.0 0.8 2.717 2.0 5.0 2.117 2.0 5.0 2.117 2.0 5.0 2.717 2.0 5.0 2.717 2.0 5.0 2.717 2.0 5.0 2.717 2.0 5.0 2.717 2.0 5.0 2.717 2.0 5.0 2.717 2.0 5.0 2.717 2.0 5.0 2.717 2.0 5.0 2.717 2.0 5.0 2.717 2.0 5.0 2.717 2.0 5.0 2.717 2.0 5.0 2.717 2.0 5.0 2.717 2.0 5.0 2.717 2.0 5.0 2.717 2.0 5.0 2.
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1 May Jn S D Do. 3pc '20 Alt	Mair. Gct.Marson Fix. 20p 30x14.4 91.0 1.1 4 815.5 1 August. Mercury Secs	Feb. JulyPipsu 10p	Apr. Nov.Presac 10p 208 - 02.0 1.9 1.455.7 J. 11.64 Apr. Nov.Presac 10p 20.0 30.1 H2.57.3 1.116.4 Apr. Racal Electronics. 218 30.1 H2.75 4.7 1.816.3 J. H64d Trac Cost. 5.2 278 278 22.0 3.0 1.046.8 18	bul Detigent, Vern'g 10p 29 5.9 0.71 2.9 3.411.5 at 15 m. Aumederooks Brond 78 M.11 4.11.18 7.518.6 bt 16 m. Aumederooks Brond 78 M.11 4.11.18 7.518.6 bt 17 m. Aumederooks Brond 78 M.11 4.11.18 7.518.6 bt 18 m. Aumederooks 78 M.11 4.11.18 7.518.6 bt 18 M.11	lec. July Foseco Mirsep. 182 14.11 7.0 0.9 5.5(1).21 14.11 7.0 0.9 5.5(1).21 14.11 7.0 0.9 5.5(1).21 14.11 7.0 0.9 5.5(1).21 14.11 7.0 0.9 5.5(1).21 14.11 7.0 0.9 5.5(1).21 14.11 7.0 0.9 5.5(1).21 14.11 7.0 0.9 5.5(1).21 14.11 14.11
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LOANS Building Societies	tor. June Smith St. Aubyn	DRAPERY AND STORES Jan May 5-6:20, Jewelley 100 22 31 13 26 37 - \$ - \$ - \$ - \$ 1 5 5 0 5 13 1 897.8 5 69. Cc. Antonio Pay 200 - 12 3781 8 - 5 - \$ - \$ 1 5 1 897.8	Nov June Sutter 50 242 5.10 2.5 0 2.5 0 3	The Non-England LT-LT-50 25.4 ab. 116.00 LA 4.5(19.00 La 2.5) an July Fisher AJ 50 86 28.11 11.5 3.00 2.5(16.00 February Freshlate Feotis 50 64 30.12 50.17 7.2 2.9(14.7 ct. Apr-6) 26.5 26.11 50.17 7.2 2.9(14.7 ct. Apr-6) 26.5 26.10 50.17 7.2 2.9(14.7 ct. Apr-6) 26.5 26.10 50.17 7.2 2.9(14.7 ct. Apr-6) 26.10 50.17 7.2	ct. App Nalma 10p 172 3012 (11.3): 3.4 1.197.1 ct. 1.4 1.705.1 ct. 1.197.1 ct. 1.4 1.705.1 ct. 1.705.1
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Financial Times Monday April 16 1984 INDUSTRIALS—Continued | LEISURE—Continued PROPERTY—Continued OIL AND GAS-Continued INVESTMENT TRUSTS-Cont. Espley Trustplo Paid Stack Price al Not Cur Er's Pric | The content of the broadly based John First Charlette Receip.

Sept. Apr. First Scot Am.

Apr. Acg. First Scot Am.

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Bay Oct. First Special Sept.

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Boc. Cap. 2120

May Hoy Fursimers Inc.

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Sept. Mar Covery Furst Sept.

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B for growth London · Leeds · Birmingham 67 MINES—Continued Australians | Secondary | Seco NOTES Apr Aus Thregmerter Do. Warrents.

Nar Do. Warrents.

Nar Bov Do. Cap.

Apr. Apg Tribure Invest Inc.

Nay Tracs. Oceans.

Apr. Apg Tribure Invest Do. Cap.

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Aug. Mar Winer-bostom 5p

Feb. Aug Do. Warrents.

Apr. Sept. Yeoman Inv. ### MINES

Finance, Land, etc

MINES

Central Rand

Mines MINES Finance, Land, etc | April | Company | April | Co REGIONAL AND IRISH STOCKS OPTIONS 3-month call rates May Afey Corp SA 51,50...

Jan JuhylAng Am Coal 50c...

Jan JuhylAng Am Coal 50c...

May Oct Ang Am Gold P1...

Feb. Aug Langiovas 50c...

Jan. JulifCharier Cors. 2p...

May Dec Corrs Gold Fields...

July May/East Rand Con. 10p.

Oct. May/Gencor 40c...

Neverther Gencor Inv. R1

Mar Oct/John Freits S.A. 5c...

Feb. Oct/Julif Way/Gencor 40c...

Aug. Feb. Middle Win 25c...

Aug. Feb. Middle Win 25c...

May Nowthearen 3 801.40...

Mar Sept. New Wits 50c...

October Pand London 15c...

January Rand Man. Press. R1

July Jan T vasi Cors. Ld. R1...

Sept. Mar Jivogels 2 bg... | Feb. | June Fairline Boats 10p | Jan Augustasum 1 OIL AND GAS Oct. July Nov. Jan. May Oiamond and Platinum MaylAnglo-Am.lw.56c ... 567 | 5110 | 5590c | 2.3 | 3.2 |
Oct. De Berrs Df Sc. ... 543mlp.4 | 0-40c | 0-4.3 |
Aug. Do. Aop. Pl. RS. ... 900 | 30.17 | 3200c | x | 13.0 |
Oct. Impata Plat 20c ... 5114 | 12.3 | 7085c | 1.9 | 4-4 |
Mayl_Yenchung 12²cc ... 700 | 26.3 | 0-40c | 1.0 | 3.3 |
Sept Risc, Plat. 10c ... 850 | 13.2 | D54c | 0.9 | 3.7 | Nov. Apr. Jas. Apr. Nov. May Jan. Feb. "Recent Issues" and "Rights" Page 16 This service is available to every Company dealt in on Stock Exchanges throughout the United Kingdom for a fee of £700 per 230 (3L10) 1070d 4.2 18.7 14 254 — — —

CURRENCIES, MONEY and CAPITAL MARKETS

FOREIGN EXCHANGES

U.S. rates hold the key

BY IONAS CROSLAND

The dollar continued a trend last week that started at the heginning of April. Since then it bas failed to mey, with any it bas failed to meve, with any surefeetedness, outside 2 range of DM 2.6050 to DM 2.6300. In this respect resistance and supcommon in that they undorling the market's reluctance to push the dollar too far in either

direction Much will depend now on how the Federal authorities decide to view current trends in money supply and inflation. Market attitudes at the moment are based of fears that the Fed is still harbouring plans to tighten its monetary stance in nrder to centain those infla-

2.2 per cent fall announced for retail sales in March was way beyond market expectations while 2 \$500 drop in U.S. M1 money supply was viewed with

equal surprise.
One set of figures is hardly
a mandate for a fundamental
rethink however and the suthorities are acutely aware of the need to perpetuate capital inflows in 6rder to effset a huge current account deficit. This may become more difficult as intorest rates start to fall. So its monetary stance in with overnight Federal funds to contain those infla-hovering around 10 per cent and pressures normally prime rates up et 12 per cent,

THE POUND SPOT AND FORWARD

April 13	Day's sprend	Close	ine month	% p.n.	Three	% p.a.
						-2.0
U.S .	1.4240-1.4350	1.9245-1.4305	0.22-0.27c dis		0.70.0.75dle	
Canada	1.8225-1.8325	1.8270-1.8280	0,20,0,30c dis		0.80-0.90dis	-1.8
Nethind.	4.22-4.25	4.23-4.24	ያት-%c pm		3-Z ¹ 2pm	2.6
Beleium	76.50-77.00	76.80-70.90	15-25c dis	-3.12	60-80dle	-28
Denmark	13.76-13.80	13.79-13.79	13-25 ore dis	-1.86	5-64 dis	-1.6
Ireland	1,2225-1,2275	1.2245-1.2255	0.35-0.45p din		1.07-1.26dm	-3.86
W. Cer.	3.74-3.7612	3.744-3.754	114-14pf pm		31-25pm	3.0
	190.00-191.50	190.50-191.00	130-345c die		450-1050dis	-15.7
Portugal		213.40-213.60	140-165c din		435-475dis	-8.5
Cpain	212.75.214.00				421-441-dis	-7.45
lisly	2318-2325	2321-2323	13-15lire dis			
Norway	10.79-10.84	10.81-10.82	4-4%ore din		11 124dis	-4.3
France	11.52-11.55	11.53 - 11.547	314-414c dis		12-14dle	-4.5
Sweden	11.13-11.17	11.15-11.16	14-24ore die		54-5% dis	-1.89
Japan	320-323	3201-3215	0.70-0.63y pm	2.48	2.06-1.95pm	2.50
Austria	25 30-26 50	26.45-26.50	51,41 gre pm	2.24	161-13pm	2.23
Owitz.	2.10-3.124	3.102-3.113	11-1c pm	4.82	43-34 pm	5.14
Ω.		or convertible		al franc	79.00-79.16.	
-	ingian ione ia i	rd dollar 1.42-			0-3.20c dia.	

OTHER CURRENCIES

	ı — · · · · ·		i	£
Apr. 13	£	5	<u> </u>	Note Rates
Argontine Peso	49.41.48.56		Austria	98,25-96.55
Australia Dollar.	1,0520-1,5540	1,0880-1,0890	Beleium	
Crazil Cruzciro.,.	1,653.0 1,964.8	1,308-1,376	Doumark	
Finland Marka	8.0165-8.0385	6.6186-5.6175	France	11,48-11,59
Greek Brachma.			Germany	3,75-5,77
Hong Kong Dollar	11.134.11.144	7.8070-7.8690	Italy	2290-2320
Iran Rial	124.10	86,95*	Japan	319-324
KuwaitDinar(KI)	6,41920-0,41985	6.9941-0.6948	Nethorlands	4,81.4,20
Luxembourg Fr	70,80-76,90		Norway	16.77-16.87
Maleysia Dollar	3.2010-3.2660	8,8870 8.8885	Portugal	185-191
New Zealand Dir.	2.1696-2.1640	1.5140-1.5165	Spain	206lg-216lg
Saudi Arab, Riyal	6.0146-0.0830		8woden	11.09-11.20
Singapore Dollar	8.968B-2 6755		Switzerland	6.094-3.184
Sth African Rand	1 7775.1 7885		United States	
U.A.E. Dirham	0.2340-5.2410			178-188
CIPCLE DI HOME,	0,50,00,00	. 0,0,100	Tagoonatia IIII	

. Salline rates.

	ECU central rates	Currency amounts against ECU April 13	% change from central mte	% change adjusted for divergence	Divergence
Belgian Franc	44.9008	45.6425	+1.56	+1.57	±1.5447
Deniek Krone Cerman D-Merk	8.14104 2.24184	8.19679 2.23062	+6.71 -6.50	+0.83 -6.58	±1.6425 +1.0642
French Franc	6.87456	8.86851	-0.09	6.17	±1.4062
Dotch Guilder	2.52595	2.51753	-0.33	-0.41	±1.4964
Irish Puni	6.72569	6.728797	+6.43	+6.36	±1.6699
Italien Lira	1403.49	1380.94	-1.61	-1.61	±4.1505

EXCHANGE CROSS RATES

	71000 101									
Apr. 13	Pound St'rling	U.S. Dollar	Deusche m'	k Japanese Yen	FrenchFranc	Swiss Franc	Dutch Oulid	Italian Lira	Canada Dolla	rjBelgian Fran
Pound Sterling	0.0eo	1.430	3,753 2,623	321 D 224,5	11.54 8,070	3,116 2,174	4.836 2.963	2322 1624:	1,826 1,279	76.86 53,75
Deutschemark Japanese Yen 1,000	0,266 3,116	0,381 4,455	11.68	65,54 1000,	3.075 35,95	D,828 8,668	1.12e 16.18	618.B 7234,	0,487 5,693	20.48 239,4
French Franc 16 Swiss Franc	0,857 0,322	1,238 0,460	3,262 1,267	\$78.2 103,2	10. 5,711	2.695	3.070 1,368	2018, 746,8	1,584 0,588	66,59 24,71
Dutch Guilder Italian Lira 1 000	0,236 6,431	0,338 6.616	6,886 1.616	76.60 138,2	2,786 47,90	0.734 1,338	1,894	548.8 1000	0,432 0,787	2e,15 33,16
Canadian Dollar Salgian France 100	0.547 1.361	0,782 1.861	2.053 4.883	178,8 417.7	5.810 15.08	1.702	2,317	1271. 3021	9 379	48.05 -

EURO-CURRENCY INTEREST RATES (Market closing rates)

											-	
Apr. 13	Sterling	U.S. Dollar	Canadian Dollar	Dutoh Dullder	Swiss Franc	D-mark	French Franc	Stallan Lira	Belgia Conv.	n Franc Fin,	Yon	Denish Kroner
Short term	812-868 868-844 814-813 8-818	16 /s · 10 /s · 16 /s · 10 /s · 16 /s · 16 /s · 16 /s · 16 /s · 10 /s · 10 /s · 10 /s · 11 /s	9倍·16吨 10倍·10%	578-6 678-8 578-6 0-618 618-675 012-658	156-184 134-178 614-686 374-378 313-318 418-414	5% 5% 5% 5% 5% 5% 5% 5% 5% 5% 6% 5%	12.724 154-1212 125-163 154-1312 144-1412 181-103	15-16 1518-1858 1658-1618 16-1812 1635-1078 1714-1754	11-115 ₀ 11-115 ₀ 11-111 ₂ 111 ₀ :115 ₀ 111 ₀ :115 ₀ 111 ₀ :121 ₀	11-111 ₂ 115q-115q 115q-115q 115q-115q 111q-113 ₄ 115q-117q	6.61 ₆ 6.61 ₈ 6.61 ₈ 61.61 ₄ 61.61 ₄	114-114 103-114 164-11 164-103 104-11 11-114

Asien \$ (closing rates in Singapore): Short-term 10³2-10³2 per cent; seven deys 10³2-10³2 per cent; one recent; one recent; one recent; three months 10³2-10³2 per cent; one year 11³2-12³2 per cent; one year 11³2-12³3 per cent; one year 11³2-12³3 per cent; one year 12³2-12³3 per cent; one year 12³2-1

Frankfurt | Paris

MONEY MARKETS

London rates bask in the sunshine

To say that activity in the London money market last week was mostly quiet and uneventful would be something of an understatement. A majority of money market instruments carried virtually the same interest rates as the week before and there were only insignificant fluctuations in

between.

Much of the torpor emanates from current uncertainties in the U.S. market. Although these rates remain relatively high, there have been a number of

UK clearing banks' base lending rate 8½-8½ per cent (since March 15 and 16)

poloters that, taken as a separate philosophy, might suggest a softer trend. Over<u>all</u> the picture

softer trend. Overall the picture is less clear and UK rates have displayed their apparent indifference by otaying put.

Confining the terms of reference to within the UK, the picture hardly becomes clearer. Money supply figures were elittle more than the market had been expecting whils the rate of inflation appeared to be right on course, showing only a marginal rise to a year on year rate of 52 per cept. This figure does not fully reflect those measures announced in the budget how-

FT LONDON

LONGON INTERBAT	
bid 10 5/6	offer 10 8/4
8 months	U.S. dollers
Ыд 10 7/8	offer 11

The fixing rates are the orithmetic means, rounded in the nearest une sixteenth, of the bid and offered rates for \$10m quoted by the market in five reference banks at 11 c.m. each working day. The banks are National Westminster Bank, Bank of Tokyo. Deutsche Bank, Benque Nationale de Paris and Morgan Guaranty Trust.

19 LONDON MONEY RATES

Discount Houses Deposit and Bill Rates 634 848 878 859 859 874 874 812 918 814 656 834 811 834 831 9 811 844 844 844 848 844 844 844

Zurich

314-314 -

Amet'dam i

569-534 512-578

616-616 616-616

e78

0 9-3 916-9-6 9-3-036 9-3-9-3

Tokyo

5.9062e 0,21875

6,28125

167a-1714 1076-1774

17-174

113-1160 1112-115

04 04 04

ever. News of a 1 per cent rise in the producer price index meanwhile was countered by a conserved to achieved despite the transfer-achievers' costs.

Against this background the market has, not unnaturally, failed to find any inspiration and the short term outlook appears little different.

In Frankfurt short term interest rates were unchanged from the week before. This was achieved despite the transfer achieved despite the transfer profits are to be transfer profits are to be transfer appeared to have a minimal effect, suggesting thet the Government may have used a substantial part to repay debts drawn through the Bundesbank's cash credit lines.

INTERBANK FIXING

MONEY RATES

Apr. 13

	Nine months	812-014	_	84	10.95-11.05	_	
•	One year		_	Bit	11.2-11.4	10-164	161-104
	Two years		16		-		i "- `
	Three years	-	104	i —	! — !	– .	l' –
•	Four years		165a	-	1 - [-	-
	Five years		104	i —	† i	_	l –
	ECGO Fixed period March 7 and finence to Houses Sase Ratiom April 1, 81-84 per cent. Cent. Tressury cates of Tax Long month 84 to the cent.	to April : uses seven ita (publish 1984. Lon London O Sills: Aven Deposit (Se per cent; o	3 1984 (inc. deye' not ad) by the ador and 8 apposit Rate iga tendar indes 6). Language indes 6). Language indes 60 des apposit Rate and and additional and apposit Rate and additional and apposite apposite and apposite apposite apposite apposite and apposite apposite and apposite apposit	luzive: 8.5 ice, other Finance In cottleh Co for auma mtas of d Deposit of mths 8%	976 per ce s seven di louses Ass Gearing Se at seven di iscount S.3 v £100,000 per cent; t	mt. Local sys' fixed ociation): S ink Rates days' notice 1776 per ce and over. hrse-elx me	euthorities Finance Fig per cent for leoding 64-54 per nt. Certifi- hald under

	MONET PRIES	
-	NEW YORK (4 pm)	
	Prime rete Staken loen mite eFd funds No Fed intervention	12 11 105 ₁₄
	Treasury Bills	
t	One month Two month Three month Six month Dne year	9.74
1	Treasury Sonds	
1	Two year	99 ²⁵ 2 975 99 ³⁵ 2

MONEY DATES

LONDON fearing a substantial decline in THREE-MONTH EURODOLLA Sim points of 100% the dollar than those looking for a further appreciation.

Whatever the trend in U.S. interest rates over the next six the U.S. economy, there seems little chance of the market becoming fully relaxed until after the November Presidential April 13 Prev. close \$1,4840-4850 \$ 1,4310-4330 0,24-0,25 dis |0,24-0,26 dis 0,71-0,73 dis |0,74-0,77 dis 5,05-3,18 dis |3,80-3,25dis

FORWARD	8pot	1 month 1.4325	2 month 1.4373	0 month 1.4445	19 month 1.4616
k	. 3.7525 . 11.5400 . 3.1100	3.7483 11.5777 2.0873 320.4	3.7244 11.6681 3.0707 319.1	2.6559 11.8367 3.0339 316.9	3.6515 12.1733 9.9666 312.8
NK OF ENG	LAND 1	FREAS	URY B	ILL TE	NDER
i And	13 April (e i		April 16	April 6

	April 13	April C		April 16	April 6
ille on offer	£100m	£100m	Top Accepted	8.38502	8,38509
applications otal allocated	£783m £100m	£521,865m £100m			8.38209 8.56%
accepted bid lotment at	£97.91		Amount on offer at next tender		£100m
minimum level	102	25%			

there seems to be little sense

at the moment to move away from deliars. It may be that U.S.

rates are expected to ease a little

this may already be written into the dollar but there are also fears that rates for the rest of the year will rise.

While the latest string of

economic statistics may have

inhibited any concerted rise in the dollar, there has been strong

resistanco at the lower levels of its current range, possibly sug-gesting that underneath it all

April 13	Spread	Close	One month	% p.a.	Three months	% p.a
ÚKŤ	7.4240-1.4350	1.4295-1.4305	6.22-0.27c dis	-2.88	6.70-0.76ds	-2.03
I retand t	1.1630-1.1710	1.1680-1.1670	0.17-0.13c pm		6.55-0.47pm	
Canada	1.2770-1.2790	1.2785-1.2790	6.05-0.03c pm		6.07-0.05pm	
NethInd	2.9480-2.9700	2.9615-2.9635	1.12-1.07c pm		3.42-3.37pm	
Belgium	53.50-53.80	53.74-53.76	3-47c dis		8.12dis	-0.7
Denmerk	8.6075-9.6625	9.6425.9.6476	.20orepm20dis		2.00-1.50pm	
W. Cer	2.6125-2.6320	2.6220-2.6230	1.11-1.00pf pm		2.30-3.25pm	
Portugal	132.90-133.90	133.40-133.90	70-215c dis		250-650dis	- 13.49
Boaln	148,95-149.75	149.25-149.35	77-87c dis		240-270dle	-6.84
tely	162012-1630	1623 - 1624	7-7-lire dis		211-221-dis	-5.40
Norway	7.5425-7.5715	7.5625-7.5675	1.60-2.10om dis		4.20-4.70dis	-2.39
France	8.0425-8.0925	0.0675-8.0726	1.00-1.20c die		4.40-4.90dis	
Sweden	7.7780-7.8076	7,8025-7,8075	.15orepm35ds		.35pm15db	
Japan	223.55-225.10	224.40-224.50	0.88-0.78y pm		2.52-2.42pm	
Austria	18.39.18.52	18.50-18.51	6.90.6.40gro pm		20.50-18.50p	
5witz	2.1640-1.7816	2.1730-2.1740	1.28-1.24c pm		3.85-3.82pm	
t UK	and Ireland e	re quoted in l			premiuma e	
disco	unte apply to	the U.S. dolla	r and not to the imnes. Financia	Indivi	dual current 55.25-55.30.	y.

			inco, rinanci			
URRENCY	MOAF	MENIS	CORI	KER	CY RA	169
Apr. 19	England	Morgan Guaranty Changes%	April 15	Bank rate	Special Drawing Rights	European Currency Unit
terling S.dollar	79.9 187.3	-11.2 +16.2	Sterling U.S. S CanadianS	10.78	0.740983 1.06094	6,595163 0,851380 1.08781
anadian dollar ustrian schilling elgian franc	88.7 117.1 85.4	-2.5 +4.4 -11.D -6.6	Selgian Fr Danish Kr	117	19,5478 66,8080 15,2036	18.6739 46.6425 8.19679
arish kroner eutscha mark wiss franc uilder	79.1 127.0 148.2 116.9	+8.8 +11.3 +4.9	Culidor	5	2,77680 5,18248 8,55701 1721,11	2.23062 2.51763 6.86861 1380.94
rench Trane	67.6	-14.7 -18.0	Yen	5	237.544	191.060

ır. 19	Bank of England Index	Morgan Guaranty Changes%	April 15	Bank rate	Special Drawing Rights	European Currency Unit
ar	79.9 187.3 88.7 117.1 86.4 79.1 127.0	-11.8 +16.2 -2.5 +4.4 -11.0 -6.6 +8.8	Austria Sch. Seigian Fr Danish Kr D'mark Culidor	10.78 44 11 7 4 5	19,5478 66,8080 16,2036 2,77660 5,13243	6.595163 0.851380 1.08781 18.6739 46.6425 8.19879 2.23062 2.51763
Garrenty	148.2 116.9 67.6 48.8 150.6		Yen	18 5 8 81 ₂	2,30468	6,86861 1380,94 191,060 - 8,43090 126,941 6,63140 1,86107 88,6202

BRUSSELS Dne month Three mosth MILAN AMSTERDAM DUBLIN

FINANCIAL FUTURES

Close High Low Frew 89.11 89.21 89.11 89.14 89.66 89.75 89.86 98.68 29.25 98.34 39.25 83.27 97.92 87.96 87.91 87.89 87.62 — 87.59 42 2.630 (4.135) 42 day's open int. 14.041 (14.723)

20-YEAR 12% NOTIONAL CILT 250,000 \$2nds of 100%

JAPANESE YEN Y12.5m \$ per Y700

Close 0.4483 6.4533 66 (29)

CHICAGO

U.S. TREASURY \$100,000 32nds of

U.S. TREASURY

Sept Dec Merch June Sapt Dec March

Ciose 66-02 65-15 65-02 64-21 64-10 64-00 63-24 63-17

Close 90.03 89.61 89.26 88.97 88.71 88.50 88.31 88.13

High 67-00 66-15 65-31 65-10 65-06 64-25 63-29

THREE-MONTH EURODOLLAR (IMM)

High 88.90 28.44 87.97 87.59 87.25

衯

STERLING (IMM) Se per £

Close 1.4330 1.4400 1.4480 1.4590

High Low Prev 0.4575 0.4481 0.4502 — 0.4560

High Low Prev 90.78 90.01 90.18 89.76 89.50 99.78 89.40 89.26 89.40 89.12 80.96 89.10 88.89 88.70 88.50 88.57 88.50 88.57 88.36 89.31 88.35 88.17 88.13 88.16

WEEKLY CHANGE IN WORLD INTEREST RATES

FRANKFURT

BASE LENDING RATES A B.N. Bank Allied Irish Bank Amro Bank Hongkong & Shanghal & Kingsnorth Trust Ltd. 10 Knowsley & Co. Ltd. 9 Lloyds Bank S. Mallinhall Limited S Henry Ansbacher Armco Trust Ltd. Associates Cap. Corp. Banco de Bilbao Bank Hapoalim BM

Mallinhall Limited
Edward Manson & Ce.
Meghraj and Sons Ltd.
Midland Bank
Morgan Grenfell
National Bk. of Kuwait Bank of Ireland Bank of Cyprus

Bank of India

Bank of Scotland

Banque Belge Ltd. National Girobank ...
National Girobank ...
National Westminster
Norwich Gen. Tst.
People's Tst. & Sv. Ltd.
R. Raphael & Sons ...
P. S. Refson & Co. ... Banque de Rhone Barclays Bank Beneficial Trust Ltd... Bremar Holdings Ltd... Brit. Bank of Mid. East Roxburghe Guarantee
Royal Trust Co. Canada

J Henry Schroder Wagg
Standard Chartered ... Castle Court Trust Ltd. Cayzer Ltd.
Cedar Holdings
Charterhouse Japhat... Trade Dev. Bank TCB Trustee Savings Bank Choulartons Ioly Citibank Savings Ioly Clydesdale Bank 81% C. E. Coates United Bank of Kuwait United Mizzahi Bank... Citobank Savings 94%
Clydesdrie Bank 81%
C. E. Coates 91%
Comm. Bk. of N. East 81%
Consolidated Credits 81%
Co-operative Bank 81%
The Cyprus Popular Bk 81%
Dunbar & Co. Ltd. 81%
Dunbar & Trust 91%
E. T. Trust 99% United Mitrain Bank...
Volkskas Limited
Westpac Banking Corp
Whiteaway Laidlaw ...
Williams & Glyn's ...
Wintrust Secs. Ltd. ...
Yorkshire Bank
Members of the Accepting !
Compatives. Members of the Accepting ribbes Contributes.
7-day deposits 6.25%. 1-months 6%. Fixed rate 12, months 6.25%.
7-day deposits on sums of: mder 10,000 5%. 210,000 up to £50,000 6%. £50,000 md over 7%%.
Call deposits £1,000 and over 5%%.
21-day deposits £1,000 and over 5%%.
Mergage base rate.

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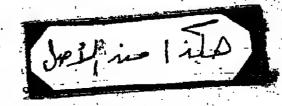
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FINANCIAL TIMES SURVEY

THE DESK TOP REVOLUTION

The desktop revolution has started in earnest as professional personal computers begin to appear on executives' desks. To some, they represent a new measure of power and effectiveness. Others, perhaps still in the majority, fear they will soon be clinging on desperately, swept helplessly towards an alien digital future. This survey examines the biggest change in business technology since the invention of the telephone.

INSIDE

The office of the future: battle lines are drawn over workstations 2 Personal computers: the goal of one terminal per employee looks attainable 4

Major suppliers: changing approach to office automation 4 Choosing the best system: key factors when making a decision 5 Software: new packages help users to do their own programming 6 Digital facsimile systems: benefits of a faster flow of information 6

Micro-mainframe links: plugging into the corporate network 7 Local area networks: a crucial period ahead 8

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Personal computer market leaders: key European statistics 18

Italy: the microcomputer market lags behind other European countries 18 Nordic suppliers: manufacturers

confident they can hold their own against the giants 18 France: continuing craze for infor-

mation technology 19 manufacturers'

revenues: European statistics 19 Case study: benefits of the Canada Line network 19

The personal computer market: two main rivals jockey for Decisions on office automation: few managements seem ready to accept automation without some cost justification 20





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One year and three months ago David Jones, writing for the Financial Times, said "I have much to thank Pete & Pam Computers for in providing support". Pete & Pam Computers tries m keep in touch with its customers so that, if one solves a particular problem, the solution is available to its other customers". Financial Times 18th, January 1983.

Two months later, the Drawing Paper, the publication for Draughtsmen, Engineering Designers, Architects and Graphics Designers, reported "Whilst the company has grown considerably, its reputation for offering help and

advice still holds good". The Drawing Paper, March 1963. Surveyor, the Public Works weekly, said in June "Pete & Pam Computers range of bang-up-to-date prodocts for the Apple was, and still is, second to none, and its knowledge of the products excellent".

Surveyor, 9th, June 1983.

In August's edition of Computer Dealer, John Hartley said "Pete & Pam Computers had to be our first choice with an excellent reputation for technical support". Computer Dealer, August 1983.

And Ron Ede, writing for the local Government Chronicle in August, reported "I was appointed at a time when hardware and software for the Apple was not as readily available as it is today, but I found excellent suppliers in micro computer distributors. Pete & Pam Computers. As computer professionals, we knew exactly what we wanted to get out of the Apple. Pete & Pam Computers came op with the goods and the service required".

Local Government Chronicte, 5th, August 1983.

Paul Walton, in the February edition of Software, writes "Pete & Pam deals with the widest and fastest growing range of micro computer packages on the market".

Software, Fehruary 1984.

In the Business World, the Computer World and in Public Services the opinion seems to be the same — a growing company, a growing range, yet still maintaining that essential personal touch.



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Above: The Microsoft Mouse, a hand-held screen pointing device. Left: Users of the Hewlett Packard 150 touch the screen to initiate response from the

Right: High definition screens, exemptified by the Apollo "Domain" workstation pictured here, improve graphics emphility. The small pad to the right of the key-heard can be touched to guide



Difficult decisions are now being made about the best way of moving ahead in the pursuit of office automation

Battle lines drawn over work-stations

THE ELECTRONIC workstation for executives has always taken stage centre 1981 the Government has in scenarios of the office of the future.

The same of the second
With the evolution of the professional personal computer over the past decade, these predictions have been realised. Steven Johs and Stephen Wozniak started work on the design for their "Apple" computer back in 1975, a machine produced in very small numbers. They launched the Apple II in 1977 and from that moment the revolution was pretormable revolution was unstoppable.

More than a million professional personal computers were sold in the U.S. in 1982, more than 2.6m by the end of 1983. IBM, the world leader in professional computers, expects to ship more than 1.5m of its machines this year.

At least 150 companies are At least 150 companies are now manufacturing personal computers—the leaders include IBM, Apple, Wang, DEC, Hewlett Packard, Tandy, Commodore, NCR, Sperry, ICL, Philips, NEC, Epson, and ACT. A new industry has grown up, making and packaging the software needed to run business applications on these machines. Its leaders include

machines. Its leaders include Microsoft, Digital Research, Peachtree, Vivicorp, Microfocus and Lotus Development. But it would be a mistake to

range of peripheral equipment, a comprehensive selection of software and a price tag

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BY ALAN CANE

tion is only about the genesis and evolution of the profes-sional computer. The picture is much more complex than that.

It involves difficult decisions ebout the best way to move ahead in office automation. The factors which have to be taken into account include the cost of the equipment, the cost-benefits expected from their think that the desk-top revolu- edoption, the response of office

workers to the new office practices which will inevitably follow the installation of "intelligent" machinery.

It will involve consideration of the kind of jobs which lend themselves to office automation and the jobs which may be displaced or lost as a result. This, of course, is a counsel of perfection. Like most human endeavours, the move to office automation is likely to involve automation is likely to involve stops and starts, mistakes, mis-understandings—together with the occasional triumph. In the UK, for example, since

sponsoring a series of office automation pilot programmes at a cost of about £5m. Preliminary results were released last week suggesting difficulties and disappointments have been the order of the day, rather unmitigated succ

But there was no enthusiasm among the participants for a return to the old manual office, although they found it hard to rationalise their belief in an electronic future.

The pattern of development in office automation has been one of small practical steps taken in the shadow of massive conceptual leaps;

Consider the typewriter, The first word processors became available in the middle part of the 1970s but there was no sudden rush for these new fargled machines. Instead, office managers moved to electronic typewriters, cheaper, more familiar machines that had a few observable advantages compared with electric machines — memory, eutomatic printing routines, spelling checkers which were derived

from computer technology.

Today, there is still more immediate interest in the brief-case sized Brother "personal printing machines" costing up to, say, £300 than in fully fledged personal word proces-

The personal computer itself is a very humble realisation of the executive's electronic work

tation conjuged with the dreams of 25 years ago.

These dreams, generated chiefly in the Xerox Corporation's research laboratories in Palo Alto, California, centred Palo Alto, California, centred in other words, they are describing to Frost and around a screen which represented to be computer from most of their workstations is a keyboard and "mouse" which they can draw down in compatability with other which to communicate with the processing IBM has already the a common complaint, computer and a network linking made this clear by namines and to share equipment such as the 3270 Personal Computer. and to share equipment such as the 3270 Personal Computer, large file storage devices and The 3270 is IBM's most popular.

Xerox's failure to steal away with the office automation mar-ket, given such a feast of novel ideas, is probably equalled only by Univac's fallure to hold on to the data processing market after IBM's initial lack of

Advanced concepts:

There were other factors at work, however. Kerox was try-ing to implement advanced concepts in a technology not cheap enough for the purpose, Xerox eventually produced its prototype "Alto" workstation s a commercial product, the Star," but far too late (1981) and far too expensive (\$16,000).

Apple Computer produced its own version of the Xerox approach, Lisa in 1983 — but again too late for IBM was already making massive strides in the personal computer marketplace—and, at \$10,000,

marketplace—and, at \$10,000, still too expensive.
This January, Apple launched Macintosh which at just over \$2,500, at last brought technology down to a price at which it could be considered as a starter in the automated

It has to be said that, so far, the desk top revolution looks like being a replay of the early years of commercial computing when after a slow start and with products which were only adequate rather than only adequate rather than sparkling, IBM proceeded to win more than 80 per cent of the majority of national com-

win more than 80 per cent of the majority of national computer markets.

Already it has more than 30 per cent of the U.S. market and DEC. Wang and to a lesser extent more than 27 per cent of the U.S. market and DEC. Wangs approach, implestign metaphor for the deak top and where it launched mented in its "Alliance" work. The projections suggest the matchine only two years ago and where it has met meaning and to a lesser extent to staff will approximate that DEC. Wangs approach, implestign mented in its "Alliance" work. The screen may well become its machine only two years ago and where it has met meaning and human factors.

Wang and to a lesser extent to staff will approximate that the its machine only two years ago and where it has met meaning and human factors.

Wang a not or its approach owing little from the following and to a lesser extent to staff will approximate that the its conditions is to integrate data, the metaphor for the deak top word, image, audio, networking but there will be mothing and human factors.

Wang a not or its approach owing little from the following in the integrate of personal work stations to staff will approximate that the integrate data, the metaphor for the deak top but there will be mothing and human factors.

Wang a reputation is to integrate data, the metaphor for the deak top word, image, audio, networking but there will be mothing metaphorical about the profits to be made from selling the right work station at the right time.

400-200-

IRM-look slike machines and Xerox-inspired machines, such as Macintosh. The IBM PC and its clones are basically very orthodos, and shadphforward data processing machines which are as much intelligent terminals as they are personal com-

computer terminal family.

The Macintosh-like macinin while they can be connected to mainframes for up and down loading data, are principally directed towards communications among themselves - pro-viding, for example, support for group of people in a single

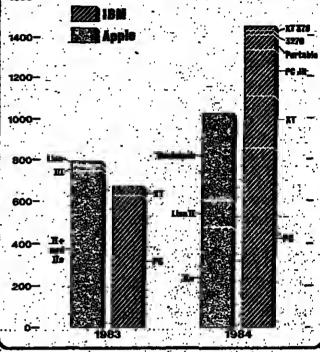
epartment. Note also that the emphasis on the kind of user has changed. Word processors came in as secretarial tools; professional computers are designed to support the executive, professional and manager.

That means a new concern with ease of use. So "mice" have started to proliferate on desk tops while Hewlett Packerd is promoting a machine with a screen you simply touch to provoke action.

("Pointing is the right meta-phor but touching the screen is not sufficiently precise," said one advocate of mouse tech-A number of companies are offering "windows"—ways of dividing the screen into a num-

can represent a metaphorical document on the metaphorical desk top.
Each of these windows canbe used to screen a separate
application. So un executiva
could have a spreadsheet open in one window, a bar chart in another belance sheet in a third

and the text of a report com-bining the results of all these windows in the fourth.



Worldwide personal computer shipments

The battle lines now seem ing — it has yet to establish to be drawn between IBM and itself as firmly in the executive IBM-look slike machines and workstation area.

It has also to be said that the Jepanese have, as yet, made fittle progress in the West with their personal computers—but this could change dramatically as NEC and others improve their marketing channels.

in a London financial company range to complain that his offices were becoming e "Tower of Babel" in information: "There are different machines everywhere I look, and there must be 15,000 firms with exactly the same proble "How do we get out of this

Chief factor

Frost & Sullivan found that in order, the selection criteria were ease of use for the typical user, software availability

user, software availability for standard users, ease of maintenance, the manufacturer's reputation, and price.

It has to be said that this hardly reflects the true world: IBM's reputation for dependability is a chief factor in the success of its PCs and it sets the standard through its operating system for ease-of-use and software evailability.

software evailability. Nevertheless, the Frost & Sullivan research showed that over 90 per cent of executives wanted a work-station and that almost all of these were pre-pared to cope with the key-board: "Many executives still feel it might be somewhat damaging to their corporate Image to use a work-station but research indicates that for the most part the perception of management in this regard is changing rapidly.

changing rapidly."

"Seventy one per cent replied that long-term desk-top workstations would fit into their corporate environments and the Images they want to convey." (The U.S. Professional/Executive Workstations Merket, Frost & Sullivan, 1983.)

The projections suggest the ratio of personal workstations to staff will approximate that of the telephone by 1990 (1:2). The screen may well become

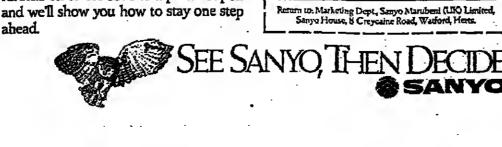
The Commuter Computer

Time spent between work—on the road, in the airport, on a train—becomes useful with the bactery powered Sharp PC-5000 Commuter Computer, it's as light as a briefcase, completely mobile, and capable of performing as many functions as an IBM PC, for only, £1,639 with anneadate availability. Includes silent A4 printer and 128k bubble memory. SuperCalc 2. SuperWriter, SuperPlaner, dBase II, available.

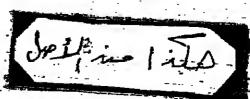


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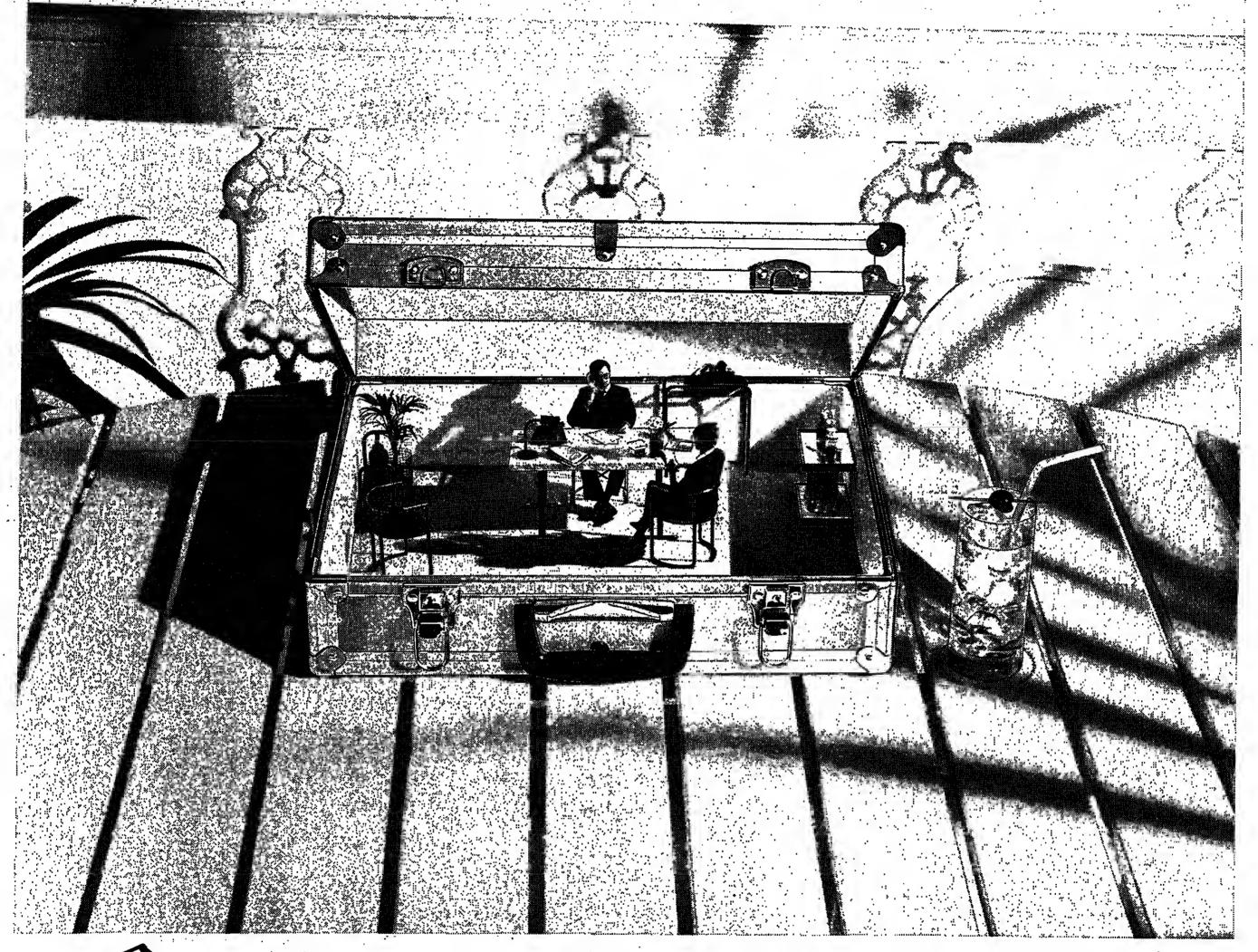




Position in Company



SHARP ANNOUNCES THE PORTABLE OFFICE.



It's something the computer world has been striving to achieve for decades. And now Sharp technology has cracked it.

The new Sharp PC 5000

16-bit portable computer. It weighs only 5kg. It travels in a briefcase just 326mm x 305mm. Yet it carries with it all the power of the full-size computer back at your office.

Because apart from its own exceptional capacity, it allows you to dial in to your own office computer for added

information, from any telephone line, anywhere in the world.

Its capacity is, therefore, unlimited. The PC 5000 computer is, quite literally, a portable office.

And because it uses a 'bubble' memory — more robust than floppy disks — you can even use it in transit, on trains, boats and planes. This remarkable machine has liquid crystal display. And is powered by rechargeable 8-hour batteries. An integral printer is also available.

All this, to help stamp out that frustrating phrase 'I'll get back to you.' Words that have lost a million business deals.

Whether it's copiers, computers,

typewriters, cash registers or calculators, look to Sharp. Business machines that put people first.

:	Sharp Electronics (UK) Ltd., Business Equipment Division, Sharp House, Thorp Road, Newton Heath, Manchester M10 9BE. Telephone: 061-205 2333. Please tick as appropriate for further details: Computers Copiers Electronic Typewriters
	☐ Electronic Cash Registers ☐ Calculators
	Name:
	Position:
	Company:
	Tel. No: FT7
	The world of
S	SHARP where great ideas come to life.

Moving towards the one-to-one ratio

THE professional personal computer is the key to the desk-top revolution.

It is becoming the de facto executive workstation, the computer terminal which combines voice telephony with data transmission, electronic mail with graphics capability, word processing with data processing.

Best estimates suggest that the market for pro-fessional personal computers (PPC) is growing at about 50 per cent a year in the U.S. and about 30 per cent a year in Europe. The average rate of growth between 1982 and 1985 is about 40 per cent world wide.

But virtually noce of the personal computers being shipped today—and the figure was 1.5m for 1983—are yet able to feature all the capabilities of the executive workstation. There are tedious business of storing insufficient indicators, however, to suggest it will be a compara-tively short time before machines combining all these features are as common on desk tops as the telephone is today.

For example:— ● North n Telecom's Display-North 7.11 Telecom's Displayphone makes possible voice and
data communications in one
desk-top unit. Claimed to be
the world's first combined business telephone and data terminal capable of transmitting,
receiving and storing informatlon, it has a video display
screen and a retractable videodisplay screen

display screen ● Lotus Development Corporation, e U.S. computer software company grew from nothing to revenues of \$53m last year through the success of a program called 1-2-3.

tedious business of storing in-formation already processing and loading the computer's memory with fresh instructions. It seems obvious, but so new is the professional personal com-puter business that until Lotus launched 1-2-3, that capability was simply not available.

first software packages which make it possible to link microcomputers to mainframes as if they were conventional computer terminals are beginning

Why should that be impor-Well, persocal computer This program integrated spread abeet analysis, data base management and graphics capability. Integrated? All that means is that it is possible to switch between these functions

They may want to be able to call down to their own machine

records beld in any one of a number of electronic files maintained by the company, or they may want to be able to treat a network of personal machines as data entry devices.

Among the leading companies which bave introduced micro-

mainframe link packages are MSA, the world's largest independent software house, to-gether with McCormack and Dodge and Informatics. According to Mr David Ferris

of Ferrin Corporation, a UK and then processed using the consultancy specialising in pro-

lar in doing good things. They have now occumulated a lot of experience in the area. Their product, called 'Peschlink,' is much improved in its second

1. 1.3

AND THE STREET, AND

The shift towards integration in the workstation is illustrated by the fact that late last year MSA announced that its Peachlink software could be inter-faced directly to Lotus' 1-2-3 package. In other words, infor-mation could be taken from a mainframe computer file, down-loaded to the microcomputer puter).

professional personal computer will become the executive workstation. But in the jungle of microcomputers available today, how can the true PPC be

First, it is a truly professional machine; typically based on a fast and powerful 16-bit or 32-bit microprocessor (16-bit machines handle 16 basic informetion units simultaneously: 32-blt machines handle 32 and approach the processing capa-bility of a mainfrance com-

said that many perfectly adequate professional marines— the Apple II, for example, use 3-bit chips and have proven fast enough for most business purposes. There is also a huge

U.S. Computer Sales

elongs to the faster machine it will be fast enough to run large financial modelling and

analysis packages like. Lotus 1-23, and it will have consider-

Electronically advanced com-panies which depend on com-puter power are moving towards the one to one altustion.

Mr Calum Macascill, deputy chief general manager of the world's largest building society. world's largest building society, the Halifax, has been quoted as saying. "Computer power is the house power of our staff now works with a computer terminal all day and 30 per cent of our staff use computer technology at some sime during the day."

IBM, the world's largest computer remnance has a ratio at puter company, has a ratio at present of 2.5 staff to each computer terminal, and sees a ratio of between two and three staff to each terminal as the norm for every company in the

There are those who would argue that eventually there will be more than one computer terminal per employee, looking forward to a point where each staff member would have his or her own desk-top computer, but there would also be a mm-

There might elso be a num-ber of portable computers which staff might take out into

rachines a ratio which manufacto to go to match the capabilities are believe to be possible at of desk-top machines, but they machines a ratio which machines at of desictor machines, but mey inversible to be possible at of desictor machines, but mey actions considerable machines date in the are reacting considerable machines are technology pushes to be a second of the state of the second of threes believe we some interest as techniques of what it is suggest that in reasonably back the frontiers of what it is advanced companies the ratio is possible to do no a small space. It staff to each personal came. Machines the Husty and Huster, the Grid Complete and Huster, the Grid Complete that

the Gavilan tiny machines that also into a briefcase yet have liquid crystal or electroRuminescent displays on which word processing or graphics word processing or graphics creation are penfectly rossible—are changing ideas of mobile computer power.

Expensive ...

According to Ellenby, founder of Grid Systems which makes the beau-tiful but expensive Compass: "We are emberking on a new We are emberking on a new generation of products which will complement the desk-top variety, and that portable computers will over the years become a major business tool." He went on: "I also believe that they berald a major breakthrough in computing culture which will significantly change not only the standards of users and telecommunication authorities, but will affect manufacturing and component design

ing and component design substantially." substantially."
IBM clearly thinks so and so does Apple. The two leaders of the professional personal computer business have launched or are about to launch their own portable machines. Within

years the deak top revolution could become the deak-top-and-

Jason Crisp highlights trends among the computer manufacturers

Big producers change gear

ABOUT four or five years ago there was a spate of weighty and antiomitative reports on office automation. In general, these tended to paint a picture of a highly sophisticated office-using a comprehensively integrafed network of computers, computer equipment and com-

As early as 1981 it had become more or less obligatory for equipment ampliers in the U.S. to spell out their office automation strategies. When Hewlett-Packard, Digital Equipment (DEC) and Wang an-nounced their office automation that autumn, several analysts sniffed that they were late. then practically every any from the world of uters, office equipment telecommunications were a major player in this new inte-grated world of computers and

consummications. But everyone saw the customer as the Fortune 500 type of company.

About that time a fierce debate grew around local area networks, supposedly the each ial communications channel to tial communications channel to link workstations, computers, wordprocessors, laser printers and every other electronic device imaginable.

device imaginable.

The big question was, would everyone opt for baseband systems like Ethernet backed by Xerox, Intel and DEC or would they go for a broadband system like Wangnet, which can carry much more information such as voice and video? But while the talking was going on two things were hap-pening in the marketplace, One office automation equipment in the conventional sensebeing bought was word proces-sing. Two, an unexpected and dramatic explosion was begin-ning in the personal profes-sional computer, the dealtop revolution had started.

"The development of the personal computer has made it the box of the future, the universal terminal. It has become the key route to office automa-tion although I doubt most users recognise this at the moment," comments Nell Farmer, sentor consultant at Butler Cox, one of the leading consultancies, studying office automation.

particularly in the U.S.—of IRM in personal computers has put-beyond question that it will be the major force to office automation. In addition to its dominance of the mainframe dominance or me manurame computer business it is now expected to produce about im personal computers this year, many of which will be extensively used in large organisa-

IBM also has a 20 per cent stake in Rolm, the fast growing Californian telecommunications group, which greatly strength-ens its position in that field. Wang, the U.S. wordprocess-

areas: word processing data. But few can doubt that the processing image processing major impact in office automa-audio processing (voice mail), tion has come from the personal networking and "himan

Wang's first major draft of Apple

office automation products launched in 1981 were for the most part samed at communicating mainly with each other. But in October last year the company launched an open access policy which should enable its products to he interested with products to be integrated with

communications between pro ducts of different companies is becoming much more common-place. Many of the leading com-Packard and Data General—are working with a number of telecommunications companies— like Roim, Mitel or Northern Telecom—to establish a common standard to enable com munications between computer equipment and private matic branch exch

(PABXs).
DEC itself must count as one of the world's potential leaders in office automation. A recent report from International Data Corporation on Major Vendor Strategies comments: "DEC, in terms of units, is the world's second largest computer compeny and it is out to achieve the same status in the office

world."
While IDC notes that it is difficult to define renking within the office automation field it says everyone knows what being number two means; "being bigger than Wang and pushing IBM."

Claims

But for most of the industry fine chance of becoming a major supplier of all types of equipment is not a reality. Even giants like Xerox, which has made some major claims to become a leading office automation supplier, finds itself successful. ceeding only in some

There is a very great number of other companies seeking to make an impact in office auto-mation, including the leading mainframe companies such as Honeywell Information Syssuch as American Telephone Telegraph, Northern Telecon Mitel...

Potentially challenge from the telecommu-nications industry comes from AT & T. which has equity and marketing links with Oliverti. the leading European office equipment suppliers. Earlier this menth AT & T launched its major range of computers. But it is likely to take AT & T considerable time to become a major force in computing

The role of the telecommuni-cations companies in general in The PABK, for instance, has become much more widely accepted as the probable centre for any network. The main advantage is that the network ing company, is generally and wiring is already in place acknowledged as the second in addition, new techniques are strongest force in office auto- making it possible to send far mation at present through its more information along a pair success in word processing and of copper wires, which means small business computers. Wang co-axisi cable is only needed has defined the key technologies—where very high volumes of office automation in six data have to be sent.

professional cor pecially from IBM PC,

According to Mr David Ferris loaded to the incrocomputer puter).

analysis packages like Lotus of Femin Corporation, a UK and then processed using the consultancy specialising in professional personal computing said last year: "MSA is particu
analysis packages like Lotus but although most of the 1-2-3, and it will have consider principal vendor's products fit able graphics capebility to deal this description—the IBM PC, with the generation of tables, said last year: "MSA is particu
gest there is no doubt that the Wang Professional Com
bar charts and the like." For the ordinary desk job, however, you could probably get away with an IBM PC

Unquestionably, IBM's PC has set the standard for personol camputers.

By naw you'd think it impossible to get executives to part with them.

Except they da. Every time they leave the affice. Cauld we, sameone osked, take the best features af the IBM PC, take the space of half a briefcase and came up with a more personal, personal computer?

The result of this challenge is the GRiD Portoble Micra. In its awn way becoming standard hardware far thase who need to work as effectively outside the office as in. Although weighing only 10 lbs, the GRiD is far from

light on power. There's 512KB of RAM. Another 384KB, a whole double-sided disksworth, of bubble memory.

Unlike the humble portable, GRiD has a full-size screen display. And with its MS DOS operating system, you can run oll your familiar PC software.

Like WordStar, Multiplan and Lotus 1-2-3.

GRiD's own software should prove instantly familiar too, be it a spreadsheet, database, word-processing or graphics package. Because learning to use one pragram teaches you to use them all.

Sole UK Distributor: Thame Systems, Thame Park Road, Thame, Oxon OX9 3XD. Telephone: 084 421 5471 IBM is a registered trade mark of International Business Machines Corporation

Finolly, you'll notice the GRiD doesn't come out of samething looking like a sewing machine box.

In its elegant, black magnesium case, it's as personoble os it's personal.

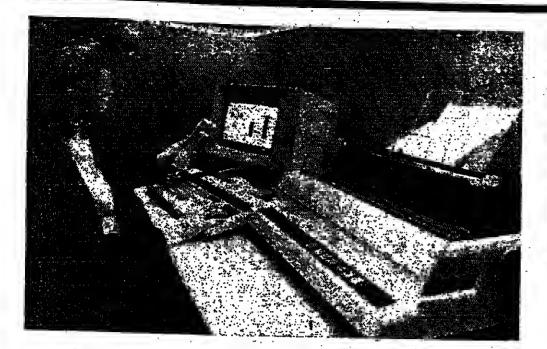
But os you might expect, there's a price to be paid for such an exceptional machine.

Should you have an ordinary desk job, your company may well decide it's unaffordable.

But should your affice usually look more like o restouront, ar o construction site, ar sameone else's boardroom, they may well decide it's indispensable.

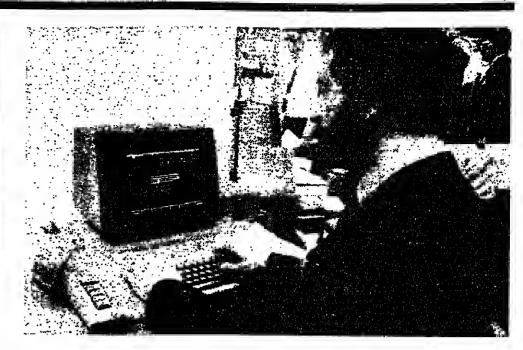


GRID Computer Systems Ltd, Unit House, 33 London Road, Reigate, Surrey, Telephone: Reigate 41211





Left: Information Technology (ITL) pioneered work-stations with the capacity to add voice "annotations" to text stored in electronic files. Centre: In a City of London showroom, a salesman demonstrates a Tandy TRS 80 computer to a prospective client. Right: Mitel's "Kontact" workstation integrates screen, floppy disk drive, keyboard and telephone handset



Choosing the best operating system is becoming increasingly complex. Claire Gooding offers some advice

How to pick a way through the maze

IN THE beginning you want one application and, at first, that's enough. You buy (according to the marketing people) "a total solution," and the operating system comes as part of it. So why bother about such technicalities as an operating system?

the packages.

Single-user systems are the Penny Plain option. CP/M and MS-DOS are both single-user systems. You sit at the screen and do one inh at a time. If

nicalities as an operating system?

The answer is that the operating system is something of a political choice. Once installed, it dictates the environment in which all other programs will have

In the same way that it The "desktop" computer can hardly matters whether your mean anything from the indevideotape is VHS or Betamax if pendent eight-bit Apple to the your only wisb is to see "The Sound of Music," certain applications look exactly the same under different "host" operating systems. But the decision affects any later muchaser and offered at the bottom of affects any later purchases; once you've chosen, you're limited to buying other software within that environment.

So it is as well to be aware of the differences, the costs, short-term and long-term, and

snort-term and long-term, and the varying vistas (or closed alleyways) offered by the different operating systems. It is no longer a questinn of whether to run CP/M or MS-DOS, the best-known and long-debated of the micro-computer operating systems. computer operating systems. The decision is more complex,

and depends on whether you want a multi-user or single user, multi-tasking or single-tasking system, and networked or not? Terms tend to be used very loosely in the computer indus-

cessors like Mutorola's 68000, and offered at the bottom of

the mini range.

In effect, the term "desktop computers" could embrace Personal Computing as first introduced by IBM: a terminal on the desk connected to the mainframe and firmly under the control of the DP depart-

The variety of operating systems used for personal computers is confusing, even to people in the industry. The more so because, despite the variety, their suppliers put a beavy reliance on the "standard" tag.

ard" tag. The importance of using a standard operating system is access it gives to popular software packages, yet the stan-dards themselves have different

you wish to print sometimes, then you must leave the current task, run the print job,

rent task, run the print job, and then find your way back to where you were.

This has long irritated users who often need to look up something in another file, or who become impatient waiting for a heavy processing jnb which ties up the terminal.

Multi-tasking systems are the next step forward. Some multi-tasking systems simply allow a tasking systems simply allow a task to run in the background, "concurrently." You still have to get out of one task or "mode" before kicking off another, although more sophisticated systems "freeze" one screen, and let you back in at the same place again when you have looked up that elusive value elsewhere.

value elsewhere. Digital Research, originator of CP/M, was one of the first companies to make things more convenient with its Concurrent

Windows bring another dimension to multi-tasking. The revolutionary concept was introduced by Xerox's famous Smalltalk system, whose inventors loathed the business dards themselves have different of logging in and out of "flavours," which in turn affect different "modes."

The solution: emulate that high-tech piece of office equipment, the desk, which allows you to bave more than one makes use of pictures ("icous") MS-DOS are both single-user systems. You sit at the screen and do one jnb at a time. If you wish to print something, then you must leave the current task, run the print job, and then find your way back to where you were.

This has long irritated users the controller for the single task on providing its own tracks use of pictures ("icous") piece of paper on it at a time, at the user chooses the function. A "mouse" controller is rolled along the desk to point the arrow to the appropriate most systems (and people) can handle is four.

Windows are undoubtedly a breakthouser for the single which allows to use. To do this, Microsoft makes use of pictures ("icous") piece of paper on it at a time. If the arrow with the user chooses the function, A "mouse" controller is rolled along the desk to point the arrow to the appropriate place on the screen.

Microsoft makes use of pictures ("icous") piece of paper on it at a time. If the user chooses the function, A "mouse" controller is rolled along the desk to point the arrow to the appropriate place on the screen.

Microsoft makes use of pictures ("icous") piece of paper on the screen simultaneously, though the limit most systems (and people) can handle is four.

Windows are undoubtedly a breakthouse for the single pictures ("icous") piece of paper on it at a time. If windows enable several tasks function, A "mouse" controller is rolled along the desk to point the arrow to the appropriate place on the screen.

Windows are undoubtedly a breakthrough for the single user, sithough they demand some fairly beavy engineering. Apple's Lisa, specifically built around the concepts of windows and pictures, paid for the novelty with a notoriously slow response.

Bandwagon

More seriously, it demanded applications packages custombuilt for its glamorous environment—not easily coaxed from the software suppliers whose eyes were fixed in the standard as set by IRM as set by IBM. The IBM
Personal Computer, using the
PC-DOS operating system based
on Microsoft's MS-DOS, was the
bandwagon everyone wanted to

Like many successful products, MS-DOS was weighed down by obligations to its patron, IBM, and to its existing users. But Microsoft could afford to make haste slowly. Its Windows prodoct, making it possible to run several MS-DOS tasks on one screen, is expected later this year.

trated on providing its own applications for the MS-DOS windows. Microsoft's Word, and its spreadsheet Multiplan, are

its spreadsheet Multiplan, are now big revenue-earners in their own right.

Unsheltered by IBM, rivals such as Visicorp and Digital Research had to be more nimble. Digital Research has been offering Concurrent CP/M for 18 months and Visicorp's VisiOn multitasking environment for the IBM Personal Computer is well ahead of Windows.

While not tied to IBM's apron strings, Digital Research is well aware that IBM's Personal Computer under PC-DOS has swelled the ranks of sophisti-cated 16-bit applications, much as its own CP/M did for the earlier eight-bit machines. It therefore adopted an "open door" policy, and in the latest version of Concurrent CP/M, Release 3.1, allows a

mixture of operating systems and applications to run on the

sheet, for example, while peace between priority tasks apart. Unix has its roots in another runs a CP/M job—or which fight for machine another MS-DOS task, even resources. another spreadsheet.

"It's purely a matter of what is most convenient for the user," said Mr Paul Bailey, who heads Digital Research in the UK. "People often need to switch tasks, and the application is still the most important aspect the environment should. aspect, the environment should,

aspect; the environment should, and does, come second."
Microsoft disputes that this enslaved MS-DOS is as advanced as its current versions, but the Idea is undoubtedly a clever one. Now that IBM has fostered a generation of applications, other manufacturers can be offered and offer warrance the

go gleaning, and offer users the best of both worlds. Olivetti, Siemens, Honeywell and British manufacturer FTS are among the takers for Con-current 3.1. The new version supports multiple-users as well as multiple tasks.

Multi-user systems demand

more of the machine—and often of the user, too. Single-user systems can be single minded about the provision of a comfortable working environment for the user. ment for the user.

Multi-user operating systems share the processor between many users and have to cope with such complex tasks as managing machine resources, locking files and records so that same screen. locking files and records so that and is working hard to provide than a nodding files and records so that and is working hard to provide than a nodding files and records so that and is working hard to provide than a nodding files and records so that and is working hard to provide than a nodding files and records so that and is working hard to provide than a nodding files and records so that and is working hard to provide than a nodding files and records so that and is working hard to provide than a nodding files and records so that and is working hard to provide than a nodding files and records so that and is working hard to provide than a nodding files and records so that and is working hard to provide than a nodding files and records so that are considered.

Because of all the engineering needed in multi-user operat-ing systems, they tend to be a lot more powerful, but pay less heed to being easy to use.

In a multi-user system, the "desktop" computer ceases to be a strictly personal tool, and

be a strictly personal tool, and becomes part of a working en-vironment, with people able to share data and files. This has advantages, with future expan-sion in mind, although the initial entry-price might look high next to the same number of single-user machines.

Alternative Networking is an alternative where each user bas a "personal" processor, but all are

While there are multi-user "upgrades" of the smaller operating systems, most eyes in the industry are fixed on Unix, originally written by U.S. telecommunications giant AT & T, as the lingua-franca of multi-user systems. While portable, Unix comes in various forms

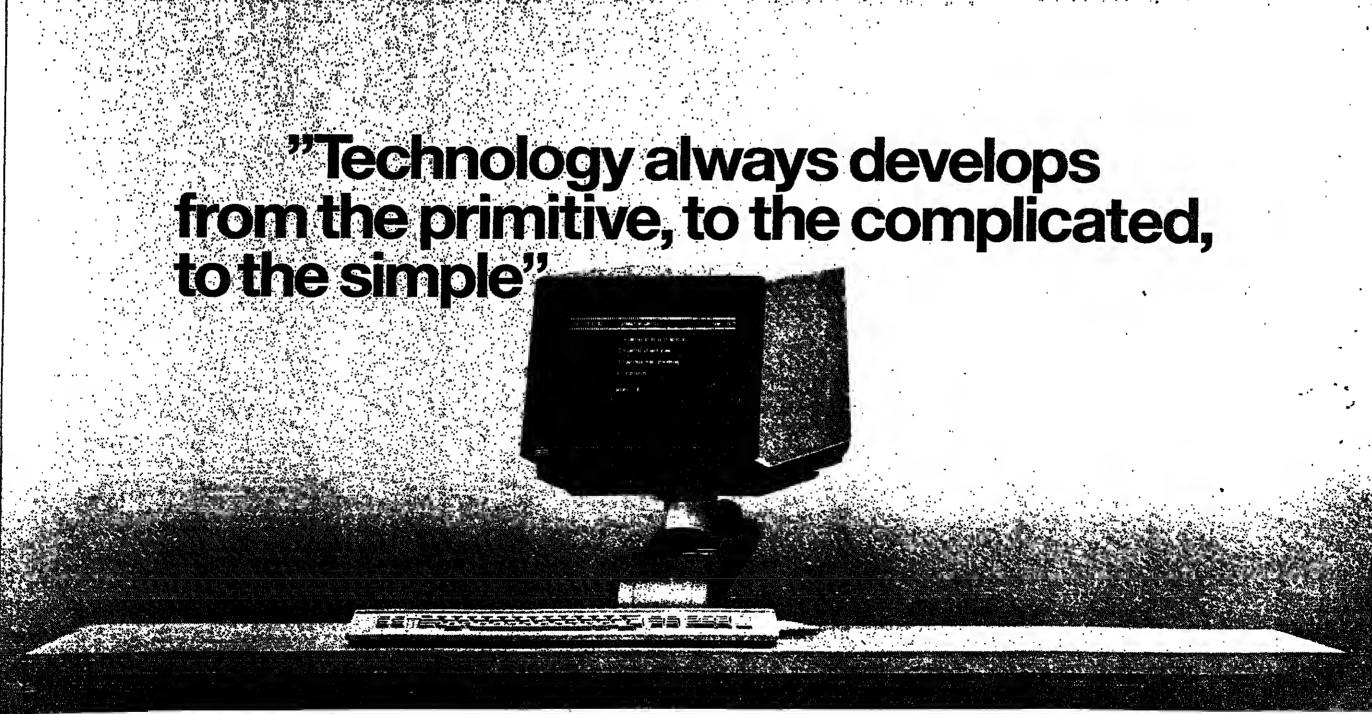
Microsoft sells a robust version called Xenix, enhanced for commercial use,

commercial environment.
Manufacturers have adopted the system with enthusiasm, but it bas taken some time for the software suppliers to catch up. However, Unix satisfies the need for a portable operating system, providing a common environ-ment across different machines, and given time it will be standard.

It does not have the multiuser field to itself; another longestablished multi-user operating system, Pick, is also becoming more popular. It may become complementary to Unix as it provides an inbuilt database and is easier to use, as well as fostering custom-built applications. These are areas in which Unix is still weak. Unix teamed with Pick would be an ideal solution.

Micro-mainframe links deserve a mention, as they provide a route (usually one-way traffic), between micro and mainframe. Using them demands some familiarity with the environ-ment at both ends of the link,

however. In fact, the glaring thing that all the operating systems bave in common is that, however "frieodly," they demand more than a nodding acquaintance.



nomputer technology exemplifies the rule. In the last thirty years, computers have evolved from huge primitive dinosaurs to compact, efficient tools. As yet, most of them are still complicated. But the process goes on.

From its beginnings, Nixdorf has worked to make computers simple. You see, we did not start at the mainframe end of the business and wend our way down to the workstation.

We started at the workstation, which places a high premium on simplicity, and worked our way up. So it should come as no surprise that Nixdorf has

built some things into its computers that most other computer companies are just beginning to recognize as being important.

Software that is friendly to the non-technical user.

For us at Nixdorf it was not enough to make our computers "user-friendly" in the broad sense of the word. We had to make them easy to use even by people intimidated by computers. And we did.

Most people who are introduced to a Nixdorf computer can begin to use it productively within a Ergonomics.

We design our computers to be flexible to the human body, as well as the human mind. So our screens adjust to different people's heights. Screen colours are easy on the eye, to eleminate strain. Even our chairs and consoles are designed ergonomically, to fit the human need - not the computer's. The goal is: simplicity.

The easier computers are to use, the more they will be used, increasing productivity enormously.

The modern world demands it. Nixdorf meets the demand.

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Software 'stands between man and machine'

New software packages help users do their own microcomputer programming

A SENIOR IBM technician once noted that "software ference between "programstands between man and the machine." This has become ming "and "coding." increasingly evident since computers moved out of the air-conditioned computer rooms on to desk tops.

As more and more people are confronted with the wondrous machines, their inadequacies as tools show up with crystal clarity.

Programming is the business of defining a problem and devising a workable solution. Coding is the business of translating that solution into the notation that your microcom-

latter. So far, no one has managed to devise a product to is the stuff of the Fifth Ganeration and, perhaps, one day maybe there will be a true program generator as a result of the enormous research effort

> This is the main area where the program generator can help. But remember that programming as distinct from coding is something that has yet to be successfully automated.

> what they actually offer, there is still plenty of scope for what is called 'end-user programming." The term end-user is computer industry jargon for the person who has to live with the system and make it work.

Many of the generator products around do belp end

The constraints come from the in some simple fact that if a tool is mad English. easy to use then it inevitably If all suffers from a lack of power. In fact ease-of-use usually comes about as a result of restricting the options available to the user—in much the same way that a simple camera is easy to use because it does not allow the "user" to control every t of its operation.

Restrictions

So programming aids are usually restricted to one area of endeavour—the major one being to handle the problems of maintaining and presenting the data in a database or filing system. As one of the major applications for microcomputers is to keep personal files it is no surprise that this should be a well populated area for such aids.

Query languages, as they are called, have been around for some time on larger machines and are often included as part of a database product. A typical example of the use of a query language would be to search through a customer database to obtain a list of outstanding creditors. IBM has been working hard on the query language problem for some years and has devised a number of products to help in this area.

Its "Query by Example" program is a case in point and enables users to ask questions

products for microcomputers around database systems such as Ashton Tate's Dhase II.

London and Quickende from Fox and Geller provide for querying this database product, as well as allowing undating of the database, Both of these products will run under either CP/M or MS/DOS and cost around £200.

One of the most famous applications generators is a product called "The Last One" supposedly "the last program you will ever need." Costing between £100 and £300, depend-ing upon the machine, this goes. mewhat further than just

and handling files of data.

The emphasis is still on file handling and the product is best suited to commercial

A recent trend in software for microcomputers is the emergence of the so-called integrated package. The best selling Lotus 1-23 product which includes a database, a spreadsheet and a graphics presentation module is the

leading example.

These products get around the problem of programming in a different way by offering a set of general purpose tools that can "talk" to each other.

A user can perform some manipulation on figures from the database using the spreadsheet program and then display chasing it nearly 60 per cent them using the graphics of their programs were created using the generator.

In sometime resembling studies of this could be figure reports or display do their programming in the screens of database infor the future. Instead of oulding matter, then this sort of thing a set of programs in do specific

Already, these products are being extended to include word as Ashton Tate's Dhase II. processing and links to main.

Antocode from Stemmos in frame systems to access introduced from porate data.

Eventually, they will probably incinde features that will enable sophisticated manipulation of databases along the lines of the expert systems talked about in the context of Fifth Generation

computing.

Then, perhaps, we shall see computer systems that can take on a lot more of the burden of In the meantime e couple of

176

program generators may be of help.
Cyris Nayler's book, Programs that Write Programs (Sigma Technical Press) is an introduc-

generator products. on Applications Programs Generators, which is aimed more at the larger computer user but does contain some details of products for micro-

Source: National Computing Centre

USAGE OF PROGRAM GENERATORS

Based on replies from 33 organisations surveyed by the NCC Before acquiring After acquiring Program generator Other methods (external software

Substantial developments in digital facsimile systems

Benefits of more rapid data flow

Dynamic Printer

data buffer

•160 cps printing speed •136 columns per line •Tractor/friction paper feed •256 user-defined character capability or 2KB input

Interpreventent

At the other end the reverse happens and the electrical signal is usually transferred to be transmission so reducing errors; to can handle photographs, happens and the electronic property of the improved dramatically and some systems have done away with appening drums and use linear scanning instead. Electronic controls have dramatically at the reduced the time of transmission which simply codes the sion which simply codes the information during scanning so that it does not transmit the most information.

At the other end of the line, the receiver reconstructs the receiver reconstructs the the receiver reconstructs the the evolution in facsimile has led to three classes of Elaine Williams

has led to three classes of

THE CONCERT of facsimile has been around since 1842 when according to their speed of Alexandre Bain carried out the according to their speed of Alexandre Bain carried out the facsimile has been the last 12 to 15 years that facsimile has been developed for day-to-day office use.

The newspaper industry was the pioneer of facsimile for the transmission of photographs and articles from distant locations to printers from the 1930s.

Today, equipment manufactured anymore and is wirtually obsolete. Also this group is incompatible with more modern. Group 2 which takes half the time to transmit and Group 3 which is a sub one times to printers from the 1930s.

The benefit of faster transmission is not just time it is considerable savings in telephone

turers are trying to increase its sion is not just time it is considerable savings in telephone nete with trip—long established costs especially international calls. Along with the sub-minute calls. Along with the sub-minute calls along with the sub-minute transmission—which can be as fast as 15 seconds—is more confacturers. Indeed it has been pact desktop models.

Lypn factor

Even faster

dominated by Japanese manufacturers. Indeed it has been Japan and the Far East where technological development and use have been the most rapid.

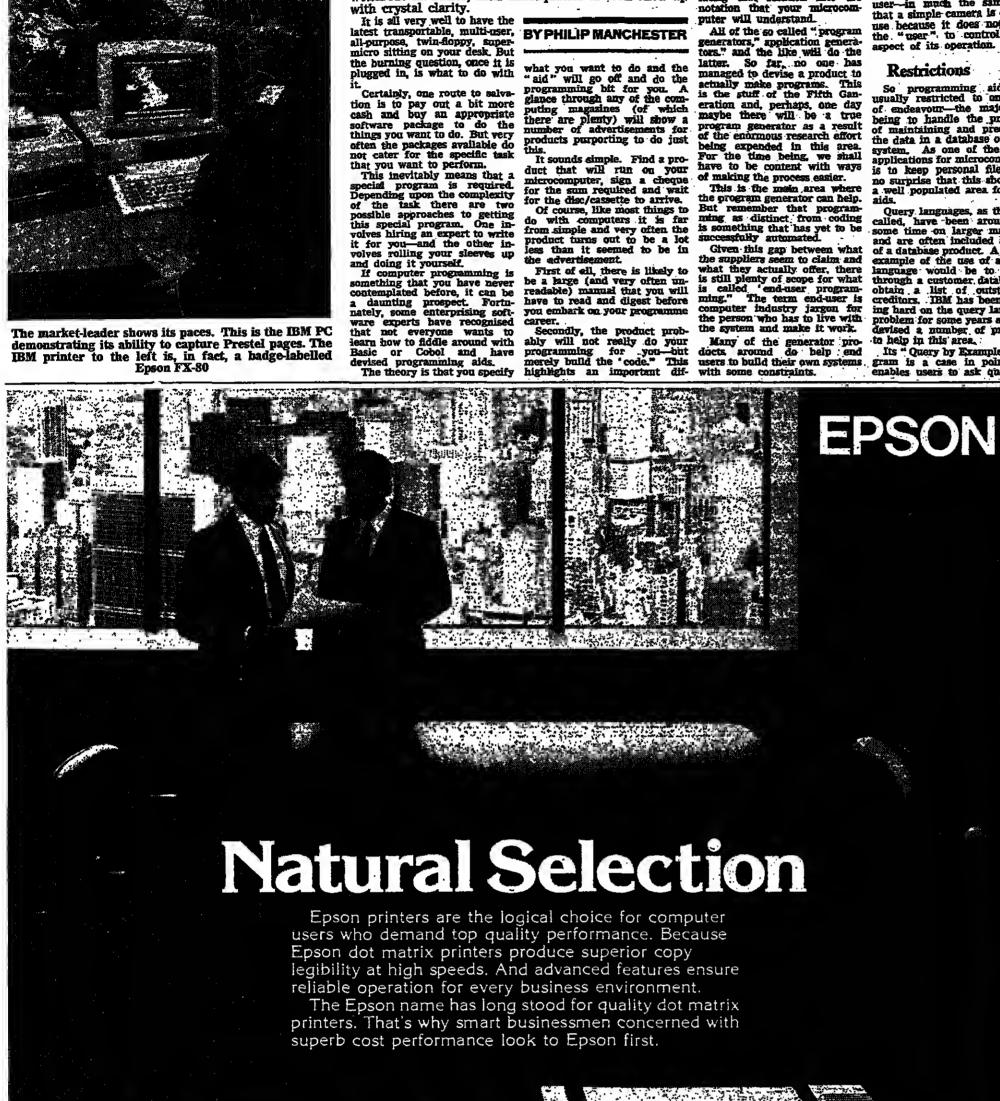
At present the world total for facsimile equipment is less than in miss. This is split between 450,000 in Japan, 500,000 in the U.S. and 85,000 in Western Equipment.

Britain accounted for 25 per cent of the West Europe market in 1985 where there are 14 suppliers. Growth is between 20 and 30 per cent in the UK. Among the competitors are Canon, NEC, Panasonic and Toshiba from Japan, Multrhead, 18M, Pleasey, Interscan, STC, Infotec, Rank Kerur and Stemens.

Some of these suppliers do not make their own equipment that of facsimile entered the market less than two years ago and has already made introduce Group 4 equipment is extreenly simple. The principle, behind early analogus facsimile transmission, equipment is extreenly simple. The principle, behind early analogus facsimile transmission equipment is extreenly simple. This defects black (festers) and white (sparse) areas. These are converted into an electrical system which can be gent down the telephone line.

Improvement in the world total facts where takes where takes the other consults and the background distance of facsimile compared with telex, for example. Letters and reports do not have to be transmission es reducing errors; At the other end, they compared with telex, for example. Letters and reports do not have to be transmission es reducing errors; At the other end, they compared with telex, for example. Letters and reports do not have to be transmission es reducing errors; At the other end, they compared with telex, for example. Letters and reports do not have to be transmission es reducing errors; At the other end of the compared with telex for example. Letters and reports do not have to be transmission es reducing errors; At the other end, they compared with telex for example.

Elaine Williams



and the same of the same Letter Quality Dot Matrix Printer •24 pins for letter-quality print

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•Tractor/friction paper feed

•256 user-defined character capability or 2KB input data buffer

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Above: example of the Mocrosoft Multiplan for Apple Macintosh. All spread Macintosh. All spreadsheet and financial planning products cite ease-of-use as a key factor. Centre: Mr David Fraser.



Graphics play an increasing part in making software more accessible. Graphs and charts can be made in minutes with the new Graphox Dataplot Plus program on Philips portable

A proliferation of spreadsheet packages reveals the most important need for many years

Getting a grip on financial planning

MORE THAN 70 per cent of the IBM Personal Computers already sold have been bought to run one program, a spreadsheet called Lotus 1-2-3. This is not just an indication that the software suppliers are in firm control of the market these days. It also means there are a lot of people out there running spreadsheet packages because they really need to do so.

Lotus has become the star, through shrewd marketing and timing, but there are so many others that charting them all is impossible. Comshare offers an entire range of financial systems, Microsoft's Multiplan is doing well, and any software directory will yield a score of other well-known names.

It is very noticeable that advertisements grasp on financial planning as the most "visible" area of personal computing. One of the reasons for this is the quick turnaround ditional accounting towards

examining cash-flow.
Information and decisions are needed at speed, and it becomes vital to optimise by playing with various possibilities and judging their effect on the financial model.

The transition of the micro-computer from the hobbyist into the business environment had a lot to do with the Visicalc broadsheet, one of the earlier and most successful

micro applications.
So the spreadsheet history is strong, and the developers have had a long time to get close to their users and find

By Claire Gooding

offered by having a micro on likely to be more than familiar the desk, instead of waiting days for the auswer from the mainframe. Another reason is the change of emphasis in transitional accounting towards.

The people using them are likely to be more than familiar with the concepts used by the programs, and elso proficient in using a numeric keypad.

All the spreadsheet and

All the spreadsheet and financial planning products cite ease of use as a prime factor. Lotus deserves its popularity, if only for the effort its developers put into making the minimum of keystrokes work to the maximum effect.

In effect, the spreadsheet has been the foot in the door for other applications. At the moment it appears to be the only application taken really. seriously, demoting the micro-computer from the all-purpose companion into a clorified—albeit remarkably clever programmable desk calculator.

The software suppliers are ready and willing to extend the They start with an advantage. executive user's relationship

users are ready for them.

The ideal picture painted by suppliers, such as Peachtree and Microsoft, is one where all office software comes from one supplier, who peddles word processing, budget programs, payroll, or accounting as well as the all-important spread-

Creeping up behind spread-sheets and word processing in popularity is the database. People are increasingly con-cerned with sharing the same data, to avoid duplicating the Certainly, office software is available, along with diaries, mail, time management, and all the extras—London software house Graffcom has just released one such suite.

But there is little proof that executives are anxious to get to grips with word processing, though it is invaluable in its place (i.e. the secretary's desk, not the executive's). It is still easier to call in the secretary and dictate a letter.

Cryptic

For, spreadsheets apart, executives are wary of the keyboard. Numbers may be as easy as 1, 2, 3, but it takes a long time to find a, b, e if unacquainted with the vagaries of QWERTY keyboard.

If finding the right keys to press takes concentration, what hope is there of getting to grip with the input needed to run an application, and even more daunting, the cryptic commands used by most operating systems. Even the gimmicks, such as the "mouse" pointer, which moves a cursor on the screen using a remote joystick; and

with his computer to include the touch-screen systems go lon, FMS-80, and various British other office functions. But it only part of the way. There is appears that they are more ready for the users than the board when developing new Systems' Rescue, and South-applications and entering data. data's Superfile.
These systems verge upon applications and entering data, though it might he easy to run them at the mere cost of an aching arm and a grubby screen.

financial planning tools.

the time to learn?

They are much more likely

to abandon the whole complex

process to the experienced pro-grammer, and stick to the piles

of paper. (Not that computers produce a paperless office in any

"applications generators": systems which can produce pro-Graphics have been playing an increasing part in making software more accessible, and are now often incorporated into grams to the users' own speci-fications without expecting them

to code.
They do, however, have to know how to analyse their husiness requirements in computer terms, enough to daunt the most

determined novice. The increase of "integrated" office systems is linked with the advent of more sophisticated

data, to avoid duplicating the effort of constantly entering data from one system onto another.

The database is a technique taken straight from the "adult" and it's knowledge the average taken straight from the "adult" acquire. A Microsoft spokesman database effectively a user must database effectively a user must have a firm grip on dp prin-ciples and terminology. How many executives want to know what a field is, or have

"The industry has delnded itself in the transition between features.

micro and mini. The end-user Last at has got used to dedicated systems like word processing, hur now that one machine can do many jobs, it's taking a while for people to catch up. Machine capabilities are way beyond user capabilities, and using these systems means ex-tensive training."

case—you just have less room for it all on the desk.) Mr Paul Bailey, of Microsoft's opposite number, Digital Research, shares the suspicion that the industry is ahead of its Best-known among the micro databases is Ashton Tate's dBase II, definitely not a novice users—and even itself—"there's an enormous culture gap," he says. "Basically, all these Rivals have improved funcsays. "Basically, all these things take some time to learn to use. And the computer intions, power, and user-interface in an attempt to overtake dBase II. They include Condor, sup-plied by MOM of Aberdeen, the dustry is very laggard about Sensible Solution from O'Han-using its own technology."

Philip Manchester on micro-mainframe links

need for the network

opened up a number of possibilities for applying computing to office work. Small computers with software packages to do word processing, filing and calculating bring unprece-dented power to the desk top.

But is a personal computer in isolation as useful as it could be? Separated from the corporate information flow, its use is limited to those tasks that are entirely personal with no prospect of fully utilising its powers to the full. The latest message that is being spread by bardware and software suppliers of all shapes and sizes is that personal computers should be plugged in to the corporate network.

In this way they can take In this way they can take advantage of other applications including electronic mail and access to corporate data. Furthermore, the extra power that large corporate mainframe computers offer, can be used to perform tasks that would be unthinkable on the much smaller and less powerful micro. In effect, the personal computer can be turned into a formidable terminal realising the promise of distributed processing.

A number of different approaches to the problem of hooking the personal computer to the mainframe are heing tried. IBM, for example, is working towards incorporating the personal computer into its overall strategy for setting up distributed computing. Even when the IBM PC was first announced it included features that let it appear like a standard IBM terminal - the 3270. Since then further announce-ments of both software and hardware have extended these

Last autumn saw announcements in the U.S. that can make the IBM PC/XT, the larger IBM micro. look as though it is a remote part of a large main-frame. This was a particularly significant move by IBM be-cause it meant that programs built for the main frame could be sent down communications In effect it means that the

same program can run on all of IBM's mainstream machines from the very smallest (the PC/XT) to the very largest. Where IBM leads, others in-

evitably follow and the group of large software houses sur-rounding IBM, the independent on a simpler approach to data-software suppliers, have all base with its so called "rela-the future together.

brought out products that take tional"

Other software companies have adopted a more general approach. A new breed of soft-ware product called a protocol emulator has been growing in popularity over the past couple of years.

Communications between computers are controlled using what are called communications protocois and a number of these are approved as international standards. Others, such as the one governing the IBM 3270 terminal have become facto" industry standards.

The emulator program sits inside a microcomputer and pretends that it is one of these standard terminals. The ACT Sirius has heen a popular choice as a vehicle for this sort of product and enables a Strius user to link up with mainframes from a number of manufac-

The user is still able to make use of the microcomputer for all of the normal tasks but at the same time can send and receive messages and data from the mainframe.

A number of companies have

produced products of this type. VHA Computer Services of Leeds and Network Designers of Oxford have emplators that can talk to ICL mainframes. Software Components specialises in 3270 emulation and Koren Computing and Zenith Plan both provide products to emulate the Digital Equipment (DEC) VT100 terminal. MicroProducts Software includes a mainframe link in its operating system software BOS and the firm's marketing manager has strong views on the importance of linking personal computers to the corporate database. "Users do not want to spend hours keying in data meetings and conferences to be to spreadsheet programs when set up through the network. is very important"

The idea of abstracting data lines to the personal computer. from mainframe databases for personal use is an important to everyone's convenience. part of the networking strategies of the major manufactice and how it will change

IBM has laid the ground for remains to be seen. this with its recent announcements in the database area, For that the micro mainframe link

advantage of this link between minating in the launch of a micro and mainframe. minating in the launch of a product called SQL. The relational approach views data as if it were a series of two dimen-sional tables — Yuch the same as the standard spreadsheet or Visicale form. Instead of a rigid structure being applied to data according to bow it has been organised in the computer, it allows the user a high degree of freedom.

It is hased on the idea that every user has a different view of the same data. It is one of the main justifications for the development of micro/main-frame links and means that every user can bave a "per-sonal" database derived from the same central pool of data administered by the mainframe. It also allows for data to be sent back to the mainframe from the microcomputer,

A typical scenario would be for a number of managers to abstract hudgeting information from the mainframe database, pull it down the communica-tions link to their personal computers, process it using a spreadsheet and send it back to the mainframe. Senior management could then take the consolidated budget informa-tion and go through the same process to arrive at an overall hudget.

At a more esoteric level, the linking of personal computers to mainframes also opens the door to electrooic mail and what is heiog called the electronic diary.

The software development company, Microfocus, bas set up an experimental system in its new offices in Swindon linking a number of IBM Personal Computers together with an IBM mainframe. Early reports suggest that the electronic mail part of the system is proving extremely useful.

they can get it from an exist-without the usual deluge of ing database," notes Neil Flynn phone calls. Each managet of MPSL. "The mainframe link keeps a diary on his or ber personal computer that may be viewed by other managers so that meetings can be arranged How this will work in prac-

people's methods of working But there can be no doubt

The Compag runs all the popular programs written for the IBM Personal Computer and works with the same printers and other peripherals.

There's really only one big difference. The Compaq Computer is designed to travel.

Carry the Compaq Computer from office to office. Carry it home at the weekend. Or take it on business trips.

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With most other portables you'd probably need to buy an additional display

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> first uncompromising portable computer. It delivers all the advantages of portability without trading off any computing power capability. After all, the first truly portable

The Compaq Computer is the

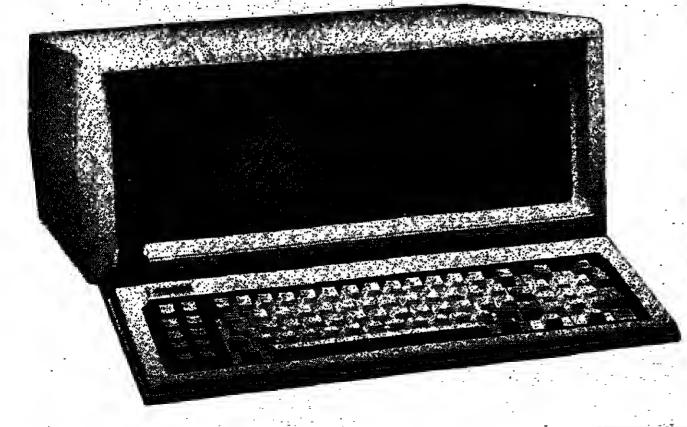
computer which is also totally compatible with the IBM PC must be destined for great heights. Already a proven winner in the USA, it is now available to you from the UK's premier vendor of micro computers - PCL.

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THE DESK-TOP REVOLUTION 8

EXTEL 'EXAMINER' FACILITY

New computer-based financial service

THE FIRST commercial installation of the Exter Examiner, a newly developed financial information service available from the financial services division of the Exchange Telegraph company, is in operation at 'The Flying Club,' British Midland Airways' new leunge at London's Heathrow Airport.

Examiner provides City, UK and international financial news in visual display form as it happens continuously throughout the day, using a 16-key pad which is similar to the remote control pad of a domestic television

Based on the Extel financial news service, the three main features are:

1. Interrogation—where up to 400 items of stored in(this represents news of the previous 11 to 2 days). A headline newsiash is featured at the bottom of every page precluding the possi-bility of missing a vital current news item, recalling previous

latest news can be viewed without the need to take any special action such as press 3. Dynamic Index an index of news items is

built up as stories are

Share prices are screened continuously by Examiner but are covered width reports such as the hourly Stock Exchange market reports. Share prices

BY ALAN CANE

comparison here is with "broad-

The advantage of broadband LAN technology is that a num-

Control

where frequency modula-



benefit to a wide range of

Developments in local area networks

crucial period ahead

LATE LAST year there was a flurry of publishing activity from IBM about a facet of office automation where it had been notoriously non-commital—local area networking, the art of linking all the electronic devices which constitute the office of the future in a cheap and effective

Local area networks, or LANs, are the glue which holds the electronic office together, yet IBM refused to give any clue to the kind of system that should become

Then its scientific review, IBM Research Highlights, devoted an issue to an article entitled "IBM Zurich-Local Area Network (LAN) Prototype." At the same time it published a "Technical Overview of a Token-Ring Local Area Network."

Then the IBM Journal of Research and Development featured on the cover of its September issue an artist's im-pression of a local area network to highlight an article entitled: "A Local Communications Netnewards with a single LAN in-terconnecting as many as 100 or more computer systems.
"Coupled with this high data work Based on Interconn Token-Access Rings:

rate is a very low error rate, typically equivalent to one incorrect bit in one thousand million bits of transferred data."

This definition is pretty con-Well, when "Big Blue" gives tutorials it behoves the rest of the world to take note. So far there have been no formal announcements, but coupled with the rash of personal computer based products for the office IBM has announced in the past few months, it cannot be long before it announced. prehensive: what options are available to the customer? One of the earliest implementations of a successful LAN was Ethernet, developed as were so many of the basic concepts be long before it announces a local area network — and it is of the electronic office by the Xerox Corporation Palo Alto likely to be of a token-passing

ring structure. Why are LANs important? There are three principal

· First, the method used for tion techniques are used-for example, Wangnet so they can pass information one to another has got to be inexpensive in relation to the cost of the computers. ber of different messages representing data, voice and video pictures can be carried through the network simultaneously.

If a personal computer func-tioning as an executive worktioning as an executive work-station costs, say \$3,000, an office manager would think twice before paying a further \$1,500 per station to attach them to a LAN.

Second, they must function reliably at high speed. There would be no advantage in trans-ferring files between office

ferring files between office workstations or in feeding files to a printer if they travelled slower than the (manual) internal mail or if the level of errors was unacceptably high.

Third, the physical method of connection — the actual wiring — must be compatible with the fabric of the building in which it is being laid.

in which it is being laid.

The Orbit study, published last year, showed that most if not all existing office buildings are poorly suited to take all the electronic gadgetry and wring that the office of the future demands. Large computers are connected to their terminals by flat ribbon cables of considerable bulk and of a specified length. ecified length.

Popular

One of the most popular methods of building LANs involves coaxial cabling a solid copper core wrapped round with copper insulation. Again, this is builty, indistible stuff, difficult to weave into the fabric of new buildings with proper ducting, victually impossible to fit into older buildings.

In the short-term, a number of companies have developed TANE based on existing tele-phone wining. Computer and Systems Engineering and Micom-Systems channeling and accom-borer, both in the UK, have developed networking systems, which allow both voice and data to be transmitted along the wires to the telephone bandset. Neither as powerful, nor as comprehensive at major LAN systems, these provide a low-cost and effective solution for

So how can a LAN be defined?
According to Dennis Longley
and Michael Shain in The
Microcomputer Users Handbook
1984 (Macmillan Reference and Paperbacks) à LAN is a: "High speed communications system operating over 2 relatively small geographic area with between 100m and 10 km of cabling."

"Data is transferred at dividual data units) a sec

How IBM sees local area networking Sender Looks for Changes Free Token to Busy Token and Appends Data Sender Generates Free Token Upon Receipt of Physical leader (From

Other systems include central ing where messages holding a "token" have right of way on

the system.
Structurally, the network can be a "bus" a single channel to which the workstations are attached, a star where each workstation is attached separately to a central control point or a ring, where the message travels from one workstation to the next in sequence being regenerated at each node.
So far, Xerox's view of the LAW has tended to take the lion's share of the publicity chiefly because of its early start

The next question is control of access to the network: what surt of "policeman" should be employed to ensure that only one workstation can send messages at one time and that. messages do not crash into one and because many other comanother.

Ethernet uses an important the technicology from it. Indeed, technique called Carrier Sense Digital Equipment Corporation Multiple Access with Collision (DEC) and Intel, the microchip manufacturer, are partiests each workstation "listens" to see if there is activity on the system.

collide, both transmitting looking in some detail at what stations stay silent for an its latic research group has arbitrary period before trying put forward. research group.

Ethernet is described as arbitrary period before trying again; by the laws of chance, transit is not modulated. The control the network.

Stations stay silent for an its Cach research group has arbitrary period before trying put forward.

It is proposing a baseband example the message in control the network.

System in which access control is achieved by passing a control the network.

Other systems include central "token" around a ring.

is achieved by passing a "token" around a ring. that detects the signals gene rated by the preceding station, captures them and regenerates the data before transmitting

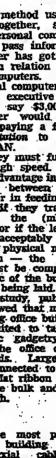
them to the next station — a fast and effective method of detecting and isolating errors.

IBM argues that the ring
structure is well suited to
optical fibre cabling — which,

than copper, offers advantages in wiring awkward offices. It claims advantages for token passing in the elimination of central control while enabling the designer to predict the average and worst case performance of the ring. Base-band systems, it says offer the greatest potential for lower

Cost.

LANs have moved quickly from laboratory curiosity to commercial electronic glue. The next few months should determine who is going to set the network if there is, they stay. The entry of IBM into the next few months sho silent; if not they are allowed LAN business will inevitably mine who is going to transmit. If two messages upset the balance so it is worth pace for the future.



International keyboard, automatic right margin flush, underlining, centring, carrier return and, you'll be reassured to know, an 'old fashioned' QWERTY

All contained within a space of . 13"x 10.3" x 2.2."

About the dimensions of an average telephone directory.

But perhaps the most amazing thing about the EP-44 is its starting price - an astonishing £249.95 (incVAT) Too good to be true?

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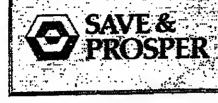


SENDONUP IN TO DEPARTMENT TRIPOTHER OFFICE EQUIPMENT DA 1900/ 1904/54-BROTHER SHEPLEY STREET GE, AUDENSI INN, MANGESTER NIM SELTEL NON 1906 SHOULD SHOW INC. 1904/54-BROTHER SHOW IN COLLY FELL BROTHER DEBUS THES LIMITLE, NEW AND JURNA, NEW AND 1904 SHOW IN SHOW I

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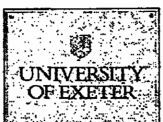
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Incredible though it may seem, the Brother EP-44 actually sends messages through space.

With the help of the humble Primarily it's an advanced portable

electronic 16 c.p.s. writer. But the Brother EP44 has one function alien to its kind.

Link it to a phone via an acoustic coupler and it will send your typewritten message to a similarly linked printer or EP-44 anywhere in the world.

By way of satellite, land line, or cable. A personalised telex, no less. Enabling you to type in Bradford, on paper in Bangkok.

However, the EP-44 isn't confined to extra-terrestrial activities.

It is an indispensable asset for anyone who communicates by the written word.

Inter-city or inter-office. What's more, the EP-44 will readily

issue a variety of commands. Connect your home computer to its RS-232C interface and it will reel off your computer command lists as you simultaneously type them on screen.

(Thankfully they'll be printed on

presentable A4 sheets-not 'bus ticket' keyboard. type rolls). And so, to the EP-44's most

important addition of all. The typist

Who will find a multitude of functions at his or her disposal on this astonishing little machine.

An LCD panel (enabling you to correct up to 15 characters typed before they even hit the paper).

A full function 4K memory with

text scroll viewing and editing facilities. A 24 x 18 dot matrix head for an exceptionally improved character

reproduction.

FT16/4

Fast becoming the biggest name in typewriters.

A look at the latest developments, from magnetic storage devices to laser-optical storage systems

Cost is the key in the storage sytems battle

THE DEMAND is growing for systems that will store and display more information at the desk top, at less frames are nowadays retrieved in perhaps 10 to 20 seconds with One system, made public in mat magnetic storage devices expanded at 18 per cent annually in the decade from 1972, reaching \$9.6bn in 1991 in the U.S. alone. The world figure can hardly be less than \$30bn.

There is also much interest in laser-optical storage systems

By Geoffrey Charlish

By Geoffrey Charlish

By Geoffrey Charlish

Tiche (a postcard-sized plece

Is cheap and text or graphics frames are nowadays retrieved in perhaps 10 to 20 seconds with One system, made public in mat of Congress where 100 Thom-stand for the usually remains unchanged for ments in digitised form. Developed by Integrated Autooth mation in the U.S., the system more than 10 to 15 seconds. It is available in the UK fram ments and display more infensity of the system and a photodetector. It is a specific to 20 seconds with one system, made public in mat computer-assisted indexing. March, is at the U.S. Library of Congress where 100 Thom-seconds in the U.S. alone in the U.S. alone in the usually remains unchanged for fairly long periods, if not indemant in the U.S., the system mation in the U.S., the system mation in the U.S. the system mation in the U.S. alone in t

Docdata for example) but in the past few years. The basic although the potential is enor-design is much more reliable and robust and the disc and

The small Winchester disc drive, a rigid, fixed alternative to the flooppy will, according to Predicast, outsell its bigger 14 inch brother by 1985 but flooppy disc drive sales will grow at 29 per cent per annum through the mid-80s, to top \$4bn in the U.S. by 1985.

Floppy disc diameters have dropped from eight inches to under 3.5 inches, but the inter-mediate size, 5.25 inches, is ex-pected to predominate for the

pected to predominate for the time being.

Cost is the key. The trend is indicated by a recent annousement from Shugart, market leader in small disc stores, of a 3.5 inch double-sided fippy drive that can hold about 1.000 pages of text per disc and costs \$200 in OEM quantities.

These tiny discs have a bard plastic shell enclosure rather than cardboard and are more assistant and a state of the cost of the company in U.S. corporate history). In the UK, ICL is a customer.

Fiche (a postcard-sized plece of film with perhaps 100 frames on it) or 16 mm roll film is sent through the mall to those needing the data. Distribution is not expensive. is not expensive.

There is also COM (computer output on microfilm), an automatic, direct conversion of computer data to human-readable microfiche frames. The technique is to photograph a cathode ray tube face on which the text has been displayed.

The arrival of the optical disc, however, is making some waves in the microfilm business and systems to convert back and was first off the mark with a production 3.5 inch unit. Easily beld in the palm of the hand, it can store 40 times the data of a 3.5 inch floppy and the data input/output rate is 10 times faster. systems to convert back and forth between electronic storage and film bave appeared.

All the new optical systems researched by Drexon, Kodak, Matsushita, Philips (Megadoc), RCA, Shugart (Xerox), Sony, Thomson-CSF, and Toshiba bave been made possible by the laser.

An extremely small spot of very intense light is switched on and off to medicin the surplastic shell enclosure rather than cardboard and are more robust and precise. Sony, Dysan, Hitachi and IBM offer similar units.

The Winchester disc has huilt a strong challenge to the floppy

Storage cost is about one U.S. cent for 30 pages. The system can easily cost £1m, but this may not matter where many terminal users in large organi-sations must access many different documents, quickly and at their desks.

High density

These systems have an extremely high recording density, exceeded at the moment only by allver halide film. Very roughly, the figures at the moment are 10m hits per square inch for magnetic, 100m for optical and 1hn for film (the hit equivalent of the (the bit equivalent of the microscopic visible text). However, magnetic and silver halides are quite fully exploited, whereas optical techniques are still young.

The magnetic media re-

searchers are fighting back with "vertical" recording. Instead of making magnetic marks along the line of recording. they are made at right angles to the tape surface. This is rather like stacking luggage on end on airport conveyors instead of laying it flat - more

Elaine Williams looks at the problems of complete integration

Voice and data links move nearer

SENIOR managers spend a great deal of time talking on sible to send data and voice the telephone—some estimates but not without sacrifices on the time is spent in telephone conversations in the working day. Only meetings take more of an executive's day.

amples of this. Today it is possible to send data and voice that not without sacrifices on either side.

The reason why companies are so keen to introduce such communications is based on several factors. One is economy, as it means that a company will

puters adorn every senior need only one network to manager's desk, they will still handle its communications. Even when personal comneed to communicate. Some industry observers see the executive's desk as the major battleground of office antoma-tion, and the telephone will be the winning weapon.

Many office systems manufacturers have formed Joint ventures with private automatic branch exchange (PABX) suppliers. For example, ICL has joined with the Canadian communications company, Mitel, IBM with Rolm, and Xerox with Siemens.

Other corporations, such as Ericsson in Sweden, already

have both office automation and communications products.

data requires a large frequency range.

125

In practice, this means that a

Another reason is the lack of keyboard skills, especially in Europe, among senior managers. A more sophisticated telephone is not as daimting as a fully-fledged computer,

amples of this. Today it is pos- not. When data is transmitted sible to send data and voice over voice circuits then the digital pulses have to be turned into the analogue signals used for voice. Usually on-off signals are transformed into two frequencies using a modem (modulator/demodulator).

digital form can be transmitted to a workstation in the same way that text messages are stored for transmission in existing systems.

What is clear is that an integrated network capable of carrying voice and data must have sufficient bandwidth to come with both It is also certain

cope with both. It is also certain that any network will be totally digital in nature, as most of the world's telecommunications equipment manufacturers are deeply involved in this tech-nology. All modern telephone exchanges have computers at the beart of their design.

Also, much of voice transcribed which the way for the day when both voice and data share the same digital network—voice and is directly mirrored by the electronic mail, computer talk, and information systems, such as videotext. There are few ex-

Voice signals transmitted on a data circuit must be similarly digitally-encoded, using a device called a codec. In the electronic office it is envisaged that route measures transfer. that voice messages stored in digital form can be trans-

There are several large capa-city data links offered which

which already have integrated their communications have tended to opt for their own

standards. Many PABX manufacturers bave stated, when launching digital exchanges that future expansion of their products will allow data to be transmitted alongside voice. Some criticism has been made that futuristic features sometimes offered in reality are a pale shadow of the

promises.

Plessey's TDX by contrast bas been, adopted by Telephone Rentals. This company chose the TDX because it did offer data communications which does not need a dedicated data

The ability to transmit data on an intermittent basis is becoming important because of the proliferation of terminals in the office. These terminals require access to a number of services such as connection to company's mainframe com poter, communications with

Only last month NEC said At such "micro-cent per bit" bad developed suitable levels, the fact that most optical material made by plating an alloy containing cobalt, nickel, rhenium and phosphorus. The recording density is claimed to be 10 times that of conventional oxides. BASF and the other media makers are con-ducting similar research.

The fact remains, however, that the claimed optical memory costs, between 0.0001 and 0.00001 cents per bit, are already less than magnetic and seem likely to drop further.

systems have no erasure bardly matters. The new, modified record segment is simply added and the old one ignored.

For legally oriented recordsystems have been developed by NHK and Matsushita and

hits region. But for images and text, this is generally accept-able.

cheap, electronically ing (banks, for example), non-compatible data storage offers and after all, about 75 per cent erasure yields a permanent exciting possibilities for the of British companies have turn-audit trail. However, erasable presentation at high speed, in overs of less than £100,000 a colour, of any kind of text, year data or image on a desk-top yet.

means some optical offerings available to anyone else—which would be found wanting with paper records cannot do. error rates in the one per 1m However, the fact that the nica will go on one disc needs to be tempered with reality. overs of less than £100,000 a year. There is bope for paper

sample quantities are expected soon. The user-terminal would go Predicasts, 11001 Cedar Financial institutions want off-line after "capturing" an Avenue, Cleveland, Ohio 44106. no numerical errors, which image, making it immediately Telephone: (216) 795 3000,

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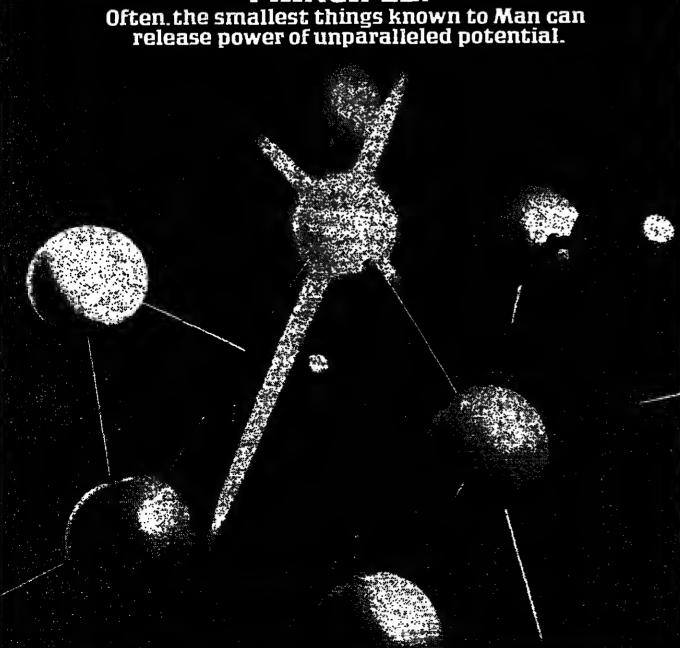
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invoices. And of course you can add peripherals such as printers and graphic plotters. Other micros may be fine for computer games. But when there's serious work to be done, come to Data General.

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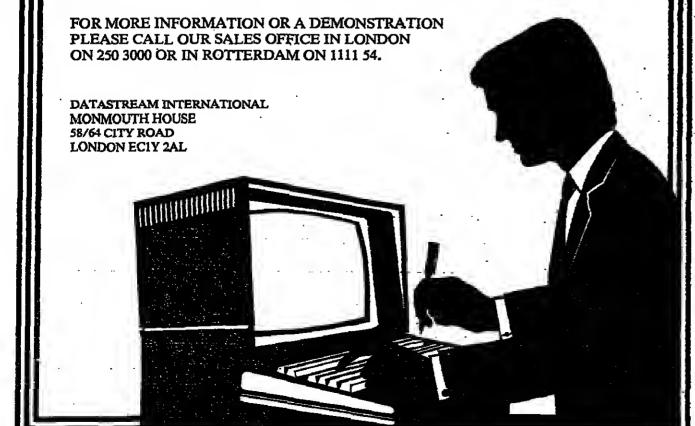
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Left: portable computers open new horizons for executives on the road. Here an Olivetti Mio is being used to send a message over the telephone lines via an acoustic coupler. Right: Mr Jeff Bonch, office automation manager of the pharmaceutical division of Ciba Geigy, using Telecom Gold's electronic mail service, via a portable Whisper Writer

Growing revenues counter fears of paperless business world

The power of print

ARE WE really plunging into a paperless business world in which, affairs will be conducted viz screen and keyboard?

Hardly. Market researchers at Frost and Sullivan conclude that, in 1982, world-wide revenues for all types of printers were between \$6.5bn and \$7.0bn.*

There are 20 or so brands of daisywheel on the market; some now print more slowly (under now print more slowly (under 20 cps) and so are less expensive (\$500, to \$1,000). They are said to be selling well.

This is some 10 per cent of the total world computer are said to be selling well.

A Well into that through a carbon rib-tonace, putting it well into that the some category.

The very few moving parts make ink-jet, printing potentially very reliable and the market some parts that the some category.

The very few moving parts make ink-jet, printing potentially very reliable and the pact. They can also print any programmed feunt or graphics on the market some parts that the some parts was ink-jet, printing potentially very reliable and the parts that the some parts was ink-jet, printing potentially very reliable and the parts that the some parts was ink-jet, printing potentially very reliable and the parts that the some parts are said to be selling well. market and the percentage has been growing, not

declining. These figures partly result from the low end (under \$2,000) printer demand brought about hy the increasing num-bers of small business com-puters. Growth in the numbers replied

worldwide, offering 500 models in at least six technologies and those figures excluda elec-

tronic typewriters, tick printers and telex machines. Clearly, paper will endure, as Centronics, IDS and Anadex Company executives want text bas dropped from nearly 70 and graphics for their briefall its advantages, cannot be carried about easily.

The three affordable categories for office printing, all operating character by character, are: dot matrix, fully formed (that is, typewriter-like), and non-impact.

In dot matrix printing, a ver-tical array of seven, nine, 16, 24 or even 32 thin rods move across the paper to make a line of print. The dots are made by the eods of the rods as they are pushed on to a carbon ribbon by tiny solenoids in appropriate, combinations to give letters or numerals. The seven wires use five columns to make a character, nine wire machines use seven, and so on.

More rods mean better-formed characters, although machines with two, slightly offset columns of wires are being used, one filling in gaps left by

the other to give a more "dotless" character.

One objective is to compete
with the "fully formed"
machines to give print quality
acceptable for company letters. Until 1982, dot matrix machines that about 90 per cent of the low end market. By 1987, it could be down to 70 per cent, according to F&S.

The dot matrix designers have

By Geoffrey Charlish

with of such printers is put by Frost machines. In one mode, 150 cps and Sullivan at 78 per cent for (characters per second) basic printing is produced by single pess, bi-directional head movethat over 2.5m such units will be sold in the U.S. alone.

But the market is becoming crowded. More than 100 vendors are said to be operating worldwide, offering 500 models

pass, bi-directional head movement with skipping of blank passes. In the second, "letter quality" work is produced by multiple passes to build up solid characters, with the speed reworldwide, offering 500 models

In three years, the Japanese da elec- have won dominance in dot ticket matrix machines and the market share of U.S. companies such graphics for their brief- per cent in 1980 to 15 per cent. The display terminal, for in 1983, according to F&S.

Today says the research company, three Japanese companies,. Epson, Okidata and Tokyo Electric have about 70 per cent of paper.

Esson, Olidata and Tokyo Electric have about 70 per cent of
this segment.

It was the U.S. company
Diablo that introduced a computer driven "typewriter" that
dispensed with the type bars or
golf balls of conventional
machines.

The design became known as
"daisywheel," because each
character of a solid fount is carried on the end of a "petal,"
forming a radial web round the
Job degrees of the "daisy."
This lightweight wheel can be
rotated at high speed to align
each character with a print
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Solid

of Diabio-each had about 30 per cent in 1982, according to

.Qume (part of ITT) had 15 per cent while another Japanese company, C. Itoh, has become a major force (19 per cent in 1982). The figures for 1983-84. however, might well be dif-ferent because companies such as Olivetti, Triumph Adler, Olympia and Hermes are making machines as part of their electronic typewriter operations, not to mention Wang and IBM.

Challenge

There will also be increasing challenge from non-impact technologies such as ink-jet, magnetic, electrostatic, electrosensitive, and thermal although the last three need special

1983 : 1984 1985 1986 1987

4\$ 59 72 92 109 (3%) (2%) (2%) (2%)

824 1.179 1.614

Source: Frost and Sullivan

869 1,436 2,644 2,686 3,551 4,019 (91%) (85%) (79%) (75%) (73%) (70%)

(6%) (12%) (19%) (23%) (26%) (28%)

A variant the NEC Spinwriter, uses a shuttlecock-like
print wheel and has given the
Japanese company a market
share commensurate with that
the simultaneous multiple
content of the impact cannot produce
the simultaneous multiple also offer fount variation.
Bur inkjet cannot produce
the simultaneous multiple
copies of the impact machine.
Although the potentially high
speed allows rapid sequential

"copying," there is apparently some office resistance to "lack of carbons. Siemens and IBM have been in the field for some years and other makers include Anderson

Jacobsen. Olympia, Printacolor and Sharp. It is estimated that 15,000 units will be delivered in Europe this year, worth about \$45m.

However, the figures so far tend to speak for themselves. The Frost and Sullivan esti-mates of low-end machines delivered in the U.S. in 1983 was 1,790,000, of which 85 per cent were dot matrix, 12 per cent solid character—but only 3 per cent non-impact. Even so, a recent report from Keith Wharton Associ-

atest is bullish on ink-jet: "In

272.5

inch and six pages a minute. There were others from Fujitsu, Mitsubishi, and Sanyo. The message was clear enough colour, graphics, and the Japanese are here to stay. * Computer Printers Market in

Europe, 1982: The Market and Competitive Outlook for Low End Printers, 1983; both from Frost and Sullivan, London (01486 8377).

† Market Report, Printers, Graphics and Integration; Wharton Publishing, Rich-mond, Surrey (01-940 7366).

CASE STUDY: STRAIGHT LINES

U.S. LOW-END COMPUTER PRINTERS

Shipments forecast in thousands of units

Moving on to system four

of the micros has fallen to Mr or so individual products. Mac Khan the company account There is also a requirement fant. The company's rapid to have two terminals in the growth has overtaken the accounts department, plus one storage capacity of its comin Mr Bayley's office, one for puters. They will shortly move sales and, once a warehouse is oo to their fourth system.

business. Mr Bayley has shown a growing commitment to office automation. Upwards of £10,000 has been spent on micros so far with another £18,000 committed for the immediate future.

"The budget for compoters good job for us, but we want is fairly open," says Mr Bayley. more information now," says "In the light of our experience we now want something that we don't have to update. One mistake we might have made is not looking at expansion."

The choosing (and the using)

The choosing (and the using) returns broken down to the 15

opened, a terminal linked to it. Mr Khan first selected an Such a specification meant a

Mr Khan first selected an Apple machine to produce move away from the Sirius invoices for 300 accounts. This which with however, be kept on machine, he says, was outgrown to handle word processing. It within months and he puralso meant a change of soft chased a Sirius with I megabyte ware. Mr Khan eventually of floopy disc storage. That selected for a package called switch brought problems in BOS. This is designed for transferring the data from one multi-users and can be tailored machine to another but it too by the software house to meet

CLIVE BAYLEY is one of life's schievers. He is the exclead guitarist of the "Yes" popy group, the ex-proprietor of the Chick nighticiuh in Cheisea and is now the head of West London-based company, Straight Lines.

This is a design and manufacturing company whose fortune is founded on the successory of cocktail glasses with built-in twirty straws. Straight Lines of cocumination of the company paid \$2,500 for the Design Council as "most of the Company paid \$2,500 for the Design Council as "most of the Company paid \$2,500 for the Design Council as "most of the Computer industry, the Company paid \$2,500 for the Design Council as "most of the Computer industry, the Company paid \$2,500 for the Design Council as "most of the Computer industry, the Company paid \$2,500 for the Design Council as "most of the Computer industry, the Company paid \$2,500 for the Design Council as "most of the Computer industry, the Company paid \$2,500 for the Design Council as "most of the Computer industry, the Company paid \$2,500 for the Design Council as "most of the Computer industry, the Company paid \$2,500 for the Design Council as "most of the Computer industry, the Company paid \$2,500 for the Design Council as "most of the Computer industry, the Company paid \$2,500 for the Design Council as "most of the Computer industry, the Company paid \$2,500 for the Design Council as "most of the Computer industry, the Company paid \$2,500 for the Design Council as "most of the Computer industry, the Company paid \$2,500 for the Design Council as "most of the Computer industry, the Company paid \$2,500 for the paid to the Sales with the TABS London distributions the Design Council as "most of the Computer industry, the Company paid \$2,500 for the paid the Sales with the TABS London distributions to force the Sales with the TABS London distributions the Design Council as "most of the Sales with the TABS London distributions to force the Sales with the TABS London distributions to force the Sales with the Sales with the Sales with the Sales with the S

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Work areas undergo radical changes

THE desk-top revolution is bringing with it not only an upheaval in working practices, but also big changes to the total office environment.

It also means a welcome spin-off for the computer-related systems furniture manuface.

systems furniture manufac-turers—a market which in Britain alone is now worth more than £40m a year.

than £40m a year.

The growing profusion of visual display units is a matter of extensive research by the integrated office systems manufacturers. In Britain, where there are more VDUs per head of the population than any other country in Europe, the Government has produced a useful guide to companies and employees alike on the use of VDUs in the office.*

It points to the possible

It points to the possible effects on the health of VDUusers and comes to the conclu-sion that "the majority, if not all of the symptoms described



The London headquarters of British Telecom's Telemessages service: desks by Lucas Furniture Systems accommodate a complex network of power and telecommunications cabling.

by VDU operators are a reflect acal environment."
tion of bodily fatigue ... symp. Provided proper precautions
toms related to the visual systilare taken and the advice ou
tem and working posture."
"These problems," it says, the user of a visual display unit
"can be largely overcome by should have no health problems
the design, selection and instal. —unless be or she suffers from
lation of VDU's and associate if a previous weakness e.g. eyedesign of the VDU operator's laight that is susceptible to
workplace, including the physical strain.

this sector.
The company expects to see

yet more suppliers entering the crowded market — but a shake-out is also likely as the

working eovironment will reduce distraction and allow for the recovery of 10 per cent of work time — "not an overambitious objective," says the Herman Miller, which leads the UK market for integrated computer-related systems furni-ture, anticiaptes "a dynamic and decisive year ahead" in

*Visual Display Units, HSE Publications, 49 High Street, Holborn, London, WC2. Michael Wiltshire

larger suppliers become larger

and the smaller ones become

As micro mania sweeps Britain, office managers are becoming more aware of the

relationship between ergonomically-designed workstations and efficiency. The mere arrival

of an impressive-looking computer on the office desk is

certainly no guarantee that efficiency will be maximised

Steelcase Strafor, the world's

problems of cable management in the electronic office.

Steelcase estimates that a fully integrated furniture system may cost around £1,100 per

Thus, the company explains, in an office of 40 (where the installation expenditure would

total £44,000), savings of up to £32,000 a year could be achieved

one assumes that the new

overnight

CASE STUDY: BENEFITS OF COMPUTER USAGE IN A SMALL BUSINESS

System cuts down monthly accounting

Stewart is an example of a businessman who once knew very little about computers. Is an official tourist information. Then be bought a system that centre. not only reduced monthly accounting chores from three weeks to just a couple of days but it also paid for itself within six months.

At first, Mr Stewart, who runs the Methueu Arms in Corsham, Wiltshire, had his own well-tried accounting methods and formulae and did not want to change them just because he was thinking of buying a computer.

Mr Tom computers in the small business. The Methuen Arms has 28 bedrooms and a staff of 35 and

> After a half-hour demon-stration of the Sord M23 Mk111 computer. Mr Stewart concomputer. Mr Stewart con-cluded that he could make it do what he wanted "rather than what it would do." The answer for him lay in PIPS, Sord's programming language developed in Japan which is claimed to be easier to learn than BASIC and which allows the partice to write his own

> the novice to write his own applications programs.
>
> A game, Old Othello, was supplied with the computer and Mr Stewart, together with his two managers, Helen Mann and Clave Carretic supplied was a team.

Variables After that he worked through the manual and very quickly assembled the kind of formulae

assembled the kind of formulae that be needed to use for his own accounting systems.

He started by putting the hotel's payroll and tax deduction cards (Pils) on it and, to begin with, made all the entries by hand. A short program then did all the repetitive calculations and produced a summery at the end

The trouble was, although he had over 30 years' experience in catering and botel management, he had no knowledge of computers. Prices tended to be more than his small business could afford and the software "might have been fine except, that it didn't suit me."

Taking the drudgery out of wages and accounts is still the mainstream requirement from the foundation programs.

A game, Old Othello, was supplied with the computer and Mr Stewart; together with his two managers, Helen Mann and Clare Carosi, worked as a team to "beat the machine".

"That was marvellous", be says. "Within about a week we could beat it eight times out of ten, and that of course gave absolute confidence, "I thought 'Right, that's got they could compute variables in

you hammered. I've brought such areas as wage calculations. into you down to my size, now I can get working!"."

For instance, having been fed usua with certain parameters, the computer can be programmed prod to work out the Free Pay and Tax due this week ooce it knows a personal code number.

In the same way it can calculate NHI contributions once it is told which deduction rate
(A, B or C) is to be used. It
was the "variable" part that
proved more interesting to bim

proved more interesting to bim in devising his program.

Using PIPS he found it easy to develop the program week-by-week and at each stage a few more lines were added. As it became more automatic it began to cope with individual circumstances such as a member of staff who was liable for tax, or a situation requiring adjustment to NHI cootributions because the gross pay for the week exceeded the maximum earnings limit, and even the pensioner who was on Week the pensioner who was on Week 1 Tax deduction. the

into use, he says it usually took him and his staff anything up to three weeks to produce these results by hand. Now with his program running on the computer, all the accounts for the previous month are ready in two or three days. This means that his management decisions cao be

On the basis of time and money it has saved, Mr Stewart says that the computer paid for itself within six months.

moch earlier

Usage of the system bas now been extended to provide a directory of all business clubs, organisation, facilities and services in the Corsham area, comprising 208 classifications, as a service to the town and to visi-tors. His accounting system will also be developed to cope with other tax bands, superannuation and personnel files,

CASE STUDY: MICRO FOCUS

New market identified

MICRO FOCUS is one of Britain's more successful young companies exploiting the explosive growth in business persocal computers. It is only itting, therefore, that the company bas one of the most advanced office automation largest office furniture manufacturer, aloog with other lead-ing suppliers, carry out exten-sive research on ways to im-prove the office workstation, as well as ways to overcome the systems, based on micro-computers.

"What we are doing is right at the leading edge," says Peter Hewitt, marketing manager at Micro Focus. The company has linked 150 of International Business Machines' top-of-therange Personal Computers to several mainframe and mioi computers

member of staff their own IBM PC/XT which can be used for everything from software development to an electronic

The Micro Focus example demonstrates how the personal computer is increasingly becomcomputer is increasingly becoming the major route into office automation. The personal computers double up as the ubiquitous terminal. But it also shows that in a world dominated by IBM computers it is often the logical choice to build such a system around IBM PCs—or rival plug compatibles.

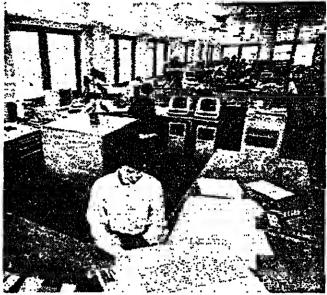
IBM PCs—or rival plug compatibles.

It should be said as far as IBM goes, Micro Focus may be a special case. The company's main business is in supplying software development aids for the microcomputer industry. These are based on COBOL, the widely used business program-ming language. The majority of the company's sales are made through computer manufac-turers. Customers include Apple, Digital Equipment, ICL. Acorn, Ferranti, Hitachi and

But Micro Focus has identified a oew market opportunity in large companies with com-puter staff trained in COBOL for the mainframe computers. As those companies move to-wards using more micro computers they will be able to pro-gram them using the Micro

Focus products.
"Most of these companies are using IBM," says Peter Hewitt. "The overriding reason for choosing IBM ourselves is the need to understand the IBM software and hardware environments for this

Micro Focus was floated on Unlisted Securities Market (USM) a year ago with oet pro-ceeds of £2.1m. Moch of the



The Micro Focus electronic office: demonstrating how the personal computer is increasingly becoming a major route to office automation.

office. The company has in- is stalled two IBM 4341 mainframe te computers which have been installed at its new offices in Newbury, Berkshire and at Palo Alto in California's Silicon

The company has installed a network of 150 IMB PC/XTs—the top of the PC range which has a large memory in the form of a Winchester disc drive. It also bas equipment from Xerox and Systime.

World network

"One of the decisions was that everyone who had a desk should also have a PC," says Mr Hewitt. "Everyone is tied into a worldwide telecommunications network — which is a major benefit for sending documents, memos and messages." One of the measures of Micro

Focus' success as a company has been its level of sales overseas, In the last financial year-when it made a pre-tax profit of £2.35m on a turnover of £9.1m -some 58 per ceot of sales were to the U.S., 27 per cent in Japan and 13 per cent in the UK. So although Micro Focus is a

small comoany—It employs a little over 140 people—It is also operating around the world and faces the problems of the different time zones in Tokyo, California and England. As a M. W. proceeds have been used to result most of the international traffic on the company's network

technical information. The company has 10 dedicated telephone circuits between the UK and U.S.

The PCs are used both as terminals and as computers themselves. For instance several are used for accounting —often using Lotus 1-2-3—including ledgers, stock control, financial and management accounts. But for long-term analysis and comparisons it may be necessary to use the main-

frame computer.
Other uses include sales information, marketing and customer mailing lists and word processing. As a result of the installation of this system, the Investment per employee is about £20,000, a figure more comparable with manufacturing industry than the average office worker, even in high technology

industries But Mr Hewitt adds: "We believe there are major benefits from that investment. We are only in the foothills of a steep learning curve and can envisage much greater expenditure per bead."

One of those benefits is that It is making this small far-fiung tcam feel as if they are working closer together. "I think people probably work better as a team because they feel colleagues

Jason Crisp

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We should be talking to each other



The state of the s

CASE STUDY: NATIONAL COMPUTING CENTRE

Key questions on efficiency

ASK Steve Price about computers to automate offices and the typing pool a dozan or so I bad to point out to myself board. To dictate letters is, that the time spent in this therefore, a more efficient way his jacket pocket. "People have Last year, Mr Abbott's wife activity would probably not of using the time." puters to automate omces and the typing pool a dozan of so that the time spent in this therefore, a more efficient way his jacket pocket. "People have have been worth the result."

The biggest scheme that the time spent in this therefore, a more efficient way to devise systems that do a his twins. He had to take time have been worth the result."

The biggest scheme of the control of the only staff in the NCC's the biggest scheme of the control of the c paper," he says.

he's talking about. He is the manager of the office systems division at the National Comdivision at the National Com-puting Centre, which earns computer, plus printer. happen in the circumstances. some £13m a year advising the Government, companies and the country at large about the best ways of using computers.

But anyone who visits the organisation's Manchester headquariers 20d expects to find the place awash with desk-top machines is in for a disappointment. The 350 or so staff in the head office (of which some people) can muster only about 200 are professional computer

Twenty of these are Apple computers which the NCC hought about three years ago. The machines are linked in a network and used by consultants and managers in the organisa-tion's office-automation and communications divisions.

These people spend most of their time writing reports and books or giving talks about the hest practices in office computers. The network, installed hy the British company Zynar, gives the computer researchers a chance to try out their ideas in real office tasks.

But apart from this system.

the other computers have been installed in a piecemeal fashion. The NCC wanted to learn about how people use the machines and come up with grand plans

"We thought we'd let a thousand flowers blooms," says Mr Price. "We can pour on the weed killer afterwards.

"In five years, we will probably have a strategy for office automation and virtually everyone will have a computer." says Dr Peter Scott, manager of the communications division. "But it's too soon to start implementing any such ideas right now."

The NCC's staff bave, how-ever, learned a lot in their use of desk-top machines which would henefit others who are thinking about office auto-

for instance, Joe who works in the Abbott sion. He researches into new programming techniques — for example, he is now working on ways to test the quality of software. Mr Ahbott bas to communicate the results to the NCC's customers, mainly through hefty reports of up to

Mr Abbott used draft reports them to a typing pool, re-edit the documents and send them

better job than a pencil and off and his work started to etter job than a pencil and off and his work started to etter job than a pencil and suffer. Mr Ahhott decided he needed a computer. The NCC in presenting financial information, sales budgets for instance. Wasn't willing to buy one for the office systems of the office systems of the office systems of the office systems.

> ing. In the four months since Mr Abbott bought the system, his productivity has shot up. He says that with the hardware he can write up to 5,000 words a day—the previous maximum was 3,200. As well as filnishing reports in half the time, Mr Abbott can make his work more polished because editing is so much easier

Whereas Mr Abbott uses his

The biggest savantage of the machine to Mr Blood bas heen in presenting financial informations are those linked via the happen in the light of different enthusiast.

For example, the machine could forecast the cash that the NCC would ohtain from its training course, and bow many people would be needed to run them, if demand were suddenly

to shoot up.
"I can get answers to a lot of 'what if' questions to a far better degree than before," says Mr Blood



Mr David Fairbairn, director of the National Computing Centre

machine solely as a word pro-cessor, Pat Blood, a manager in "There is a danger that you can get sucked into doing jobs NCC's sales-support division, has a more diverse range or applications for his Tandy microcomputer. The centre bought four of

these three years ago. Apart from Mr Blood, three other sales managers were given the machines. There was no stipulation as to what they used the hardware for.

Mr Blood and his colleagues
As an example of this, Mr
are responsible for a range of
sales activities. The items sold to assess all the charges that could be books or documents that give advice on computers. Or they could be services such as the provision of training

Despite being involved with computers for a long time (he bad heen a programmer and the head of the computer section in a manufacturing company), Mr Blood had never had a machine to himself. "One difficulty was that I had

to behave as a manager rather than as a programmer. I bad to stop myself wanting to

in too much detail. You can become ebsorbed by the power of the machine and time disappears very quickly.
"You can start to come up

with a lot of very precise information on a set of circumstances when probably you could have got by with looking at the situation on a microlevel."

the NCC's administrators levied on his staff for using the centre's hig mainframe computers. The information was needed to settle a particular query. Now the machine has been

set up to obtain the data, Mr Blood finds himself obtaining it on a routine basis—even though he doesn't really need the information. Having his own micro doesn't

even when the technology is extremely sophisticated—if the people themselves are basically disorganised," he says. mean Mr Blood has dispensed with his secretary. He did try typing his own letters for a back again. Before it was change software in the machine, while but like many managers

and secure business information. Instantly.

HiNer™ is IBM compatible, runs word and data processing simultaneously on the same network, shares disk storage and

printers, can connect to telex and communicate with the head

BANHAM ALARMS

He uses his computer not just

for word processing and for holding files but to send tit-bits

of information to his colleagues. This can be a useful way of

passing on snippets of news that people might distribute if they

pent all day chatting to col-

leagues over tea or coffee. But

they lack the time for such a welter of informal conversations

-and the information is not

deemed important enough for a

telephone call or a written

The extra communication that The extra communication that this facility produces raises tha quality of work, say the NCC's managers, although the exact effects are virtually impossible to consults.

to quantify. Sometimes people are bolder

Sometimes people are bolder using the keyboard than they would be with a written memo. For example, people may be more inclined to send to their

boss a computer message to "nndge" him into doing a job

nary jobs bnt learning how to

Despite the caution at the

NCC about setting up a cor-

porate policy on computers, one man has evidently decided that

the machines are for him. This

is David Fairbairn, the centre's director. He has a portable

Tandy computer on which he

writes his own speeches and letters—even on aeroplanes

The next step is to connect this

that be had forgotten about. Of crucial importance, says Mr Wilson, is tha time that it

run lato weeks.

use the computer,"

secretary's office.

CASE STUDY:

A route to easier accounting

BANHAM Patent Locks is one of Britain's oldest security com-panies. Its areas of involvement range from security hardware, such as locks, grilles and safes, to intruder alarms, closedcircuit TV and fire alarms. The company is divided into

several areas, one of which, the security alarms division, has already installed some 20,000 security systems. More than a year ago, the division decided to automate its accounts and administrative operations. The first stage was

the computerisation of the sales ledgers—ultimately holding full details of more than 10,000 current accounts. The division looked at several

systems, but decided that soft-ware requirements would make or hreak their particular application. It had to be capable of providing full, up-to-



installed by Bromcom.

nformation.
After software and hardware evaluations, the division even-tually decided that Bromcom was most suited to its needs. The division took delivery of a four-terminal multi-user multi-

the minute details of each processor SuperStar system customer, together with account with a slightly modified, tailor-details and invoice generation, made Bromcom sales ledger and also had to allow instant application software and a recall of archival client invoice purpose-written invoicing proprocessor SuperStar system with a slightly modified, tailor

SuperStar, which starts at £2,450, is claimed to be considerably cheaper than other competitive products, for a similar system based on a mini-computer would have cost in

excess of £20,000 and would

Sales ledger accounts could be easily updated with the knowledge that a file can be simultaneously accessed by all users, with only a particular record being locked. A message is displayed if a terminal tries to acress a record currently being updated by another terminal.

In full operation, the system allows all users (up to 16) to enter, say, invoices or payments simultaneously; this is the acid test for genuine multi-user ability. Each user can, of course, operate different packages at the same time, for instance Ledgers, WordStar, dBaseH, and so on

Designed and manufactured by Bromeom in the UK, Snper-Star is a multi-user multi- processor system that is now based around a 16-bit master processor; the system provides full record and file-locking facilities, multi-user capabilities, up to 160Mbyte of Winchester storage and fast tape streamer back-up. It supports up to 16 terminals (more by networking), each with a separate slave processor running industry standard operating systems.

Michael Wiltshire

CASE STUDY: AIRSPEED CARGO

Decision-making is far easier now

takes to learn to use an office-automation system. Even for computer professionals who can be expected to know something about bardware and software (and be interested enough to use the machines) the time can "Sending someone on a training course is not enough," says
Mr Wilson. "Managers have to
allow for employees spending a
lot of time not doing their ordi-

Their owner, Peter Widdowson, managing director of Air-speed Cargo, is proud of them: "They have made decision-making far easier because we have a monthly analysis of the busness which takes a couple of days to prepare instead of three months as it used to do with

the manual system."
They have also drastically cut the time it takes the small com-pany (63 employees) to produce quotes. Widdowson waves a sheaf of letters most of them dealing with a potential client's up to another machine in his desire to get toiletries to Kuala Lumpar quickly. The degree to which men and

women employ computers in the office, says Mr Wilson, is ultimately related to what kind of people they are.

"One thing we still don't know is how much use peopla will get out of computers—will get out of computers—the system helps us to be far

more efficient."

Widdowson is one of those businessmen who claim to know refer Marsh

Peter Marsh

Dustiessmen was computers. But it is soon apparent that his self-tought knowledge is far deeper

us for full information and the name and address of your local

Digital Microsystems Ltd, Molly Millar's Bridge, Molly Millar's

Lane, Wokingham, Berks RGI 12PO, Tel: (0734) 793131

DMS Business Centre.

a computer bureau he was using to process the sales ledger could no longer handle the work. They needed to upgrade their equipment and effectively wanted Airspeed to help with the cost. Mr Widdowson did not share the hureau's anthusiasm for their idea and decided to go

First, he worked out exactly what he wanted the system to do. Second, he decided on how much the company could spend. He admits that the costing process was far from logical and relied more on gut feelings, Then he went out to look at the technology.

"Knowing little about where to go, I approached all the hig names. But after receiving some silly offers I decided to buy from a nearby dealer," be says. Mr Widdowson adn-its that it was not one of his best decisions. The dealer went bankrupt in the early stages of the project, but fortunately the

suppliers continued to support

AT THE END of one of Heathrow's husy runways lie ten
exhausted but far from rotten
Apples, During the past four
years they have each put in
about 14,000 hours grinding out
bills of loading, certificates of
origin and the many other bits
of paper needed to mova goods
from one side of the world to from their

Loud hum

terminals.

The controlling Apples and disk drives produce a loud hum and are kept shnt up in a broom cupboard from which lead flat case of disaster.

The software had to be espec-

rally written to suit the com-pany's needs and Mr Widdowson managed to get an initial sys-tem of three terminals, three printers, a disk drive and the software for £21,000. That was days to learn, taught by one of in 1979. the experienced staff. One clerk

which is a lot better than many Tha dealer decommended a other similar configurations.

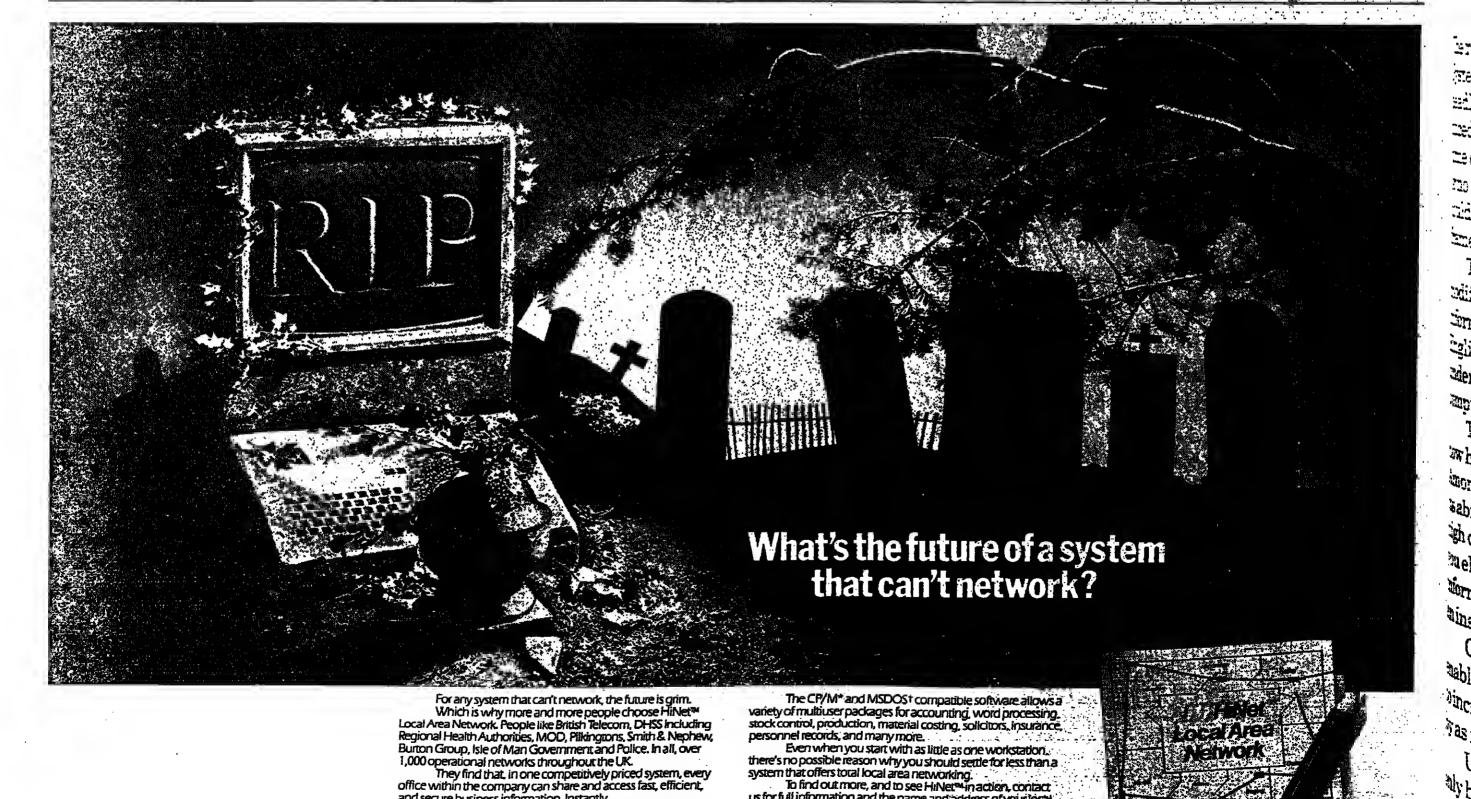
program onto a terminal. The staff have adapted and usually keep different programs running on separate terminals, scurrying up and down on their wheeled chairs like human packet switches.

There is an air of almost reckless practicality in the office. Clerks switch work from terwires connecting the other Clerks switch work from ter-computers. The cuphoard also holds a tape copier for back-up cutter by manually plugging in and security tapes which are the right connections. No fancy kept omiside the building in switches here. One important wire actually runs over the hot pipe leading to a central heat-ing radiator, but there have have been no serious break-

The staff like the system. It takes a school-leaver about three Since then he estimates the says: "In my previous job we upgrades have pushed the price up to about £40,000 which is a lot of money for a system that is nowhere near being state-of-the art. But it has worked son."

Weither could Peter Widdow-the.

Peter Knight



The revolutionary MAPPER
System from Sperry made the
headlines when it was introduced in 1981. For the first
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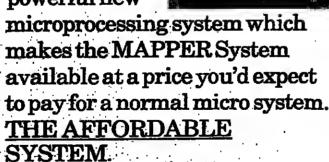
The MAPPER System now has over 70,000 users. Amongst its array of talents is its ability to display results in high colour graphics. And let you electronically mail vital information to others in an instant.

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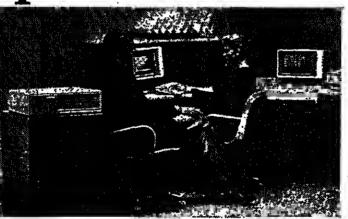
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Fierce competition between major suppliers

U.S. market becomes a battleground

BY LOUISE KEHOE

in California

personal computer. There were 650,000 IBM pereonal com-puters sold in 1983 and 1.5m

are expected to be sold in 1984.
"They are workstations wait-

dent of Forrester Research in

they also recognise that there is still a long way to go before

the diverse range of equipment that they use can be linked

together.
Like many IBM watchers, Mr

Colony expects IBM to make a product announcement in the

floors, a high-speed ring to link

"IBM and Rolm will jointly

system 370 mainframe com-

based product by October 1984,"

gateway to the outside world,"

Mr Colony predicts.

Cambridge, Mass.

THE U.S. office automation scene is not so much a is now regarded as mandatory for any new personal computer marketplace as a battleground.

The heavy artillery in the shape of IBM and AT&T are lined up for what industry watchers term "World War III." Shooting for a smaller piece of the action are hundreds of vendors of minicomputers, workstations, personal computers, private branch exchanges and the multitude of add-on products that go together to automate

Basically, IBM and AT&T will be battling over which will wire up office buildings for data communications. As the battle begins AT&T has most of the wires and IBM has most of the gadgets that hang on those wires.

Last month, however, AT & Tabegan its attack upon the IBM stronghold with the announcement of a series of mini and micro computer products. Before the year is out, IBM is expected to haunch its "wiring gratem" a lead area patwork system," a local area network, and in conjunction with Rolm Corporation the switching systems that connect local wires

to the rest of the world.

There is a lot at stake. By 1990, 80 per cent of all white collar workers in the United States will have information ing for a way to communicate," saye Mr George Colony, presidevices on their desks, accord-

ing to market analysts.

As users discover that they world personal computer shipments will total \$8.7bn this for electronic communication, year, according to International Data Corporation. Of those, the market researchers expect \$5.4bn to go to the U.S. business

Expansion

first half of 1984. He predicts that IBM's network will be multi-layered, with a ring to link IBM PCe, another to link U.S. shipments of private branch exchange (PBX) systems will top \$26m this year, according to IDC, and could grow to \$32m by 1987. Word processor sales of over \$3bn this year with the puters, potential to reach \$4.2bn by "IBI announce a very large CBX-

1987 add another gem to the office automation market crown. Then there are whole segments of the office automasegments of the office automation field that are just begin will attach IBM local area neting to emerge as sizeeble works for inter-facility com-markets. Local area networks munications, he suggests. bave heen talked about for "Rolm's PBX will be IBM's several years, but thie year they may become a widespread says Mr Colony, reality, Microcomputer software The IBM Personal Computer hs also becoming a significant market sector.

Changing the shape of the office automation market is the

(with the singular exception of

Apple Computer's products).
IBM-compatible comput IBM-compatible computer makers are, bowever, becoming increasingly concerned that "Big Blue" will introduce new proprietary features for its next neration personal computer

product leaving the "com-patible" makers out in the cold. The personal computer has also made radical changes in the office automation equinment market. In 1982, close to 54 per cent of word processing units were dedicated to that task, By 1987 less than 29 per cent will be special purpose machines, the rest will be personal computers, according to IDC.

1BM's latest addition to its personal computer arsenal includes the transfer will be personal included.

oludes the transfer of its dis-playwriter word processing software to the personal computer.

The move sorts out a previous inconsistancy in IBM'e office automation product line where the dedicated word processo competed with the person:

computer. "The PC software spells the end of the Displaywriter," says Mr John Kiefer, an analyst with Inforcarp of Cupertino, Cali-

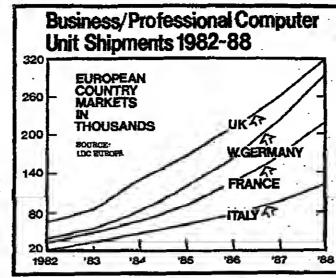
Steady gains

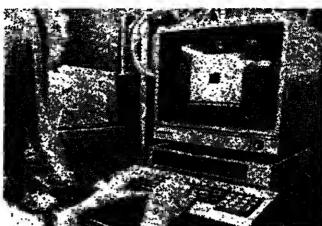
With its troops in order, IBM is steadily gaining ground in the office automation market. "The combined installed base of IBM's PCs and word processors (270,000 at end of 1982) makes it probably that more U.S. business office desks have workstations made by IBM than

by enybody else," says IDC.

But "Big Blue" is not invincible, AT & T—which
matches IBM in size and stature -is out to prove. Recently AT & T introduced "the first of several" computer products —a range of computers built around its "Bell Mac" 32-bit mlcroprocessor designed at Bell Labs. The machines range in price from \$10,000 up to \$300,000 and cover the performance of a multi-user microance of a multi-user micro-computer to a super-minicom-

A common theme throughout the AT & T range is the "Unix" operating system. Created at





The Japanese have yet to make their mark in the West in professional personal computers. This Sanyo MBC 550 gives a hint of what is to come

Already Unix bas a broad following according to the Gartner Group of industry analysts, the market for Unix-based systems will grow to \$6bn in 1986 from \$150m in 1980. AT & T is expected to take a major share of that market.

AT & T is expected to fill in the gaps in its product port-folio with several products that it will license from outside it will license from outside manufacturers. One of the most important will be Convergent Technologies, a California company that specialises in building multi-user workstation systems. Convergent is developing a special product (or products) for AT & T but they are expected to be high performance 16-bit multi-user systems.

In addition, AT & T is widely In addition, AT & T is widely rumoured to be preparing a product for the personal com-

puter market.

Bell Laboratories over a decade ago, Unix is a multi-user operating system with a strong bias toward communications.

Already Unix bas a broad foling. The company has over 60 per cent of the installed bases in the country, Rolm, AT & Te closest rival and IBM's Comrade, bas less than 8 per cent, according to IDC.

Although PBXs were originally conceived as telephone switching systems they are also capable of becoming the hub in a data, voice and electronic mail in an office network. In this role the PBX makes use of the "wires" that are already installed in every office—the phone wires so familiar to AT & T. In the short-term, industry

analysts believe that IBM, with its mastery of the desk-top, and its marketing expertise has the advantage in the office automa-tion battle, but AT & T's techremoured to be preparing a product for the personal computer market.

AT & Te entree into office fight between the U.S. giants. Software conquers complex keyboard barrier

Japan poised for new breakthrough

using a standard operating

system, such as M-DOS or CP/M.

That meant that software

written for one company's machine could be used on another machine only if it was

system. Japanese computer enthusiasts rejoice because the

price for these standard operat-ing disks has dropped from

ment in Japan.

JAPANESE software has recently conquered the \$160 to about the challenge of the 2,000 plus Chinese characters, called western nations to comes equipped to a comes equipped to the country's market for desktop computers or more operating is expected to increase rapidly, beginning this year or

A widespread lack of familiarity with keyboards, the lack of a uniform operating system among different brands, and bureaucratic barriers to computer networks have combined to leave Japan well behind the West in the use of small computers.

The Japan Electronics Deturned out by a secretary velopment Association (JEDA) skilled with brush and inkpot said that in 1982 sales of "per-Unlike Westerners, few sonal computers" increased Japanese workers—especially sharply, by 116.2 per cent in men-have ever had the need value, to Y231bn (\$1.01bn), and to type. to type. Now, impossie software has by 169.5 per cent by number, Now, imovate software has been developed so that a basic set of 2,200 Kanji can be stored on about 60 kilobits of memory, Word processing requires that an operator type out a word in either roman letters or Japanese phonetic symbols (called Kana") and then reject incorrect kanji until the correct one appears.

JEDA said sales of "office computers" increased by about 30 per cent, to 65,321, worth about \$1.5bn.

While JEDA has not yet assembled its estimate for 1983, Software International Inc. software international incomments that a million micro-computers were sold in 1983. But only 10 per cent, or 100,000, were 16-bit machines suitable for business or Japanese language word processing use. Per-haps 100,000 "dedicated" word processors were also sold.

About 70 per cent of the small computers sold this year in Japan bave been game com-puters, and Software Inter-national claims that games account for fully 80 per cent of the software sold here.

Reputation

Anyone who has visited the Anyone who has visited the workplace of a Japanese bureaucrat, businessman, or journalist would look long (searching behind the seemingly obligatory tall piles of papers) before finding a desktop computer. The few that are around are likely to be run by the young women who go to special training schools for word processing computerised

word processing computerised accounting or programing.
Indeed, Japan's reputation as a technological hotbed would pale quickly if the current state of desktop computers were taken as the major criterion. But the situation is changing very quickly.

Until recently it has been difficult for small computers to handle the Japanese character.

handle the Japanese character set, and documents were

Western nations the computer comes equipped to handle one

or more operating systems. Toshiba, NEC, Japan's leading small computer makers, with about 50 per cent of the market, and Epsom, known for its printers abroad, have moved to remedy this with MS-DOS and CP/M operating systems built in, and the result has been encouraging Others are follow-

ing.

NEC claims about 600 different types of software are available for its 9800 erries. About 100,000 of these classy machines have sold since they were introduced in October 1982, priced between Y328,000 to Y398,000 (\$1,400.\$1,750).

IBM-Japan is rapidly become ing a major force in Japan's small business computer market bere with its "5550 Multi-station." Priced between \$4,000 and \$5,000, IBM will not say how many it has sold but is known to be pressing Mat-sushita, the company which makes several major components, to increase production.

reject incorrect can until the correct one appears.

While the speed by even a good Japanese-language typist is perhaps half that of handwriting speed, typing on a Japanese word processor is now cheaper, easier, and faster than Fujitsu, Hitachi, Sharp, Poshiba, a joint venture on a Japanese typewriter, which had a keyboard as big Toshiba, a joint venture between Fujitsu and Matsushita, Sord, Apple, Radio Shack, and several others are all marketing Since mistakes can be several others are all marketing corrected on word processors, and with the result being clear Given the size and engineering and reproduceable, the interest expertise of these companies, in "wapro" as it is called here, is great among Japanese office develop in-house software experts. develop in house software engineers, the stage is set for what could be rapid increases in small computer purchases. As if the language was not enough of a barrier, the various computer manufecturers initi-ally ran into problems by not

Japan's telecommunications law has prohibited most com-puter networks, and there is nothing like the colonies of computer "hackers" in the West chatting away via com-puter. But with a new law erpected in Japan by April 1985, computer networks will develop

Fearful of giving competitors The Japanese take heart by recalling that in the 1960s the any ground, an infertile field was laid for software developfirst exported Toyotas, under-powered and tinny, literally fell In order to use software which runs on a standard operating system one must often have a special software disk with the correct operating apart at the high speeds normal on. Western highways. Few doubt that Japan will eventually overcome a similar abaky start in small computers.

> By a Special Correspondent

Once a year, for the past five years, Sir Clive Sinclair has stunned the computer world by introducing a computer product that breaks new ground in both price and technology. With his new QL micro, he has done it again.'

Personal Computer News, February '84

... a specification that obliterates contemporary price/performance standards?

Financial Weekly, January 84

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Evening Standard, January 84

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Electronics and Compating, March '84

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Electronics and Computing, March 34

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THE DESK-TOP REVOLUTION 17

Britain's enthusiasm for the personal computer is unmatched in Europe

UK market surges ahead

BRITAIN has been taking to professional personal computing with an alacrity that is unmatched in Europe although it is still a long way behind that of the U.S.

Demand in Britain has been stimulated for a number

O The market has been one of the prime targets for the U.S. industry when it looks overseas. Simply, the common language is the major factor. It often

means new products are launched first in the UK. More important, there is much more software available in the UK as it only needs relatively small adaptation—which it does not always get.

 The awareness of personal computing in business has been stimulated by the remarkable boom in home computers. One-in-10 bomes in the UK have a computer, with a high propor-tion in upper income house holds where there is a higher chance of people also using them at work.

Government has stimulated ewareness. It has backed the widespread use of computers in schools and has supported a number of trial office automation schemes

Awareness bas been stimu-lated by Britisb televislon which was the first in the world to run a major series of programmes on computer literacy
—which bave since been shown or copied around the world. Britain has for many years bad a particularly high level

of skills in computer software, although there is still a shortage of people for the industry. It bas meant there are a num-

puter specialists setting up their own companies. Most

is dominated by the leading U.S. companies. Market leader is the uniquitous IBM Personal

BY JASON CRISP

One of the most successful companies in the field is British. companies in the field is British.
Applied Computer Techniques,
based in Birmingham, is one of
Britain's fastest growing companies. ACT was e well established and successful computer
bareau. Its. dramatic growth —turnover has been doubling each year—came with its antry into professional personal computers.

ACT began by importing under licence the Sirius computer from Victor Technologies, then e high flying new Californian company. The Sirius was one of the first computer to Weet a powerful of the protection of the first computers to Weet a powerful of the protection of the first computers. to use a powerful 16-bit micro-processor which have since become more or less crucial for business personal computers.

The 16-bit processor gave the professional user the power and the speed to perform useful functions at work.

ACT undoubtedly benefited ACT undoubtedly benefited from the fact that IBM was too busy and too pressed trying to meet the extraordinary demand for its PC in the U.S. This gave ACT an edvantage of at least 18 months in which time it established itself as the market leader. market leader.

age of people for the industry. It has meant there are a number of specialist software companies which beve been set up to write programs for personal computers.

This has also resulted in a number of entrepreneurial computer specialists setting up their own composition. Their own composition is the program of their own composition and their own composition.

puter specialists setting up their own companies. Most have concentrated on home computers where there is e multitude of companies.

Successful

The best-known and most successful are Sinclair Research, founded by Sir Glive Sinclair, and Acorn, founded by two of his former colleagues, Chris Curry and Herman Hauser. Other UK companies inclinde Oric, Dragon and Enterprise, The UK professional market

ther UK companies inclinde appointed a distributor.

The UK professional market countries including the U.S. companies. Market leader appointed a distributor.

Suppliers is keen to increase the level of direct sales of personal computers to companies. The UK professional market countries including the U.S. "The trend is very markedly itself where ACT has just towards direct sales particularly because of the increase in

More aid for high-technology sectors



Apple has yet to announce its portable so others have done it first. This is the British-built Xcalibur—basically an Apple II in a box with tiny monitor screen and integral disk drive

computers as the core of office

automation strategies. The sup-pliers want the direct contact

and bulk orders from large organisations to form a building

block for office automation

Snch a move could easily make the environment for the

dealers significantly tougher. One observer reflected that just

as there is an excess of manu-

so there are also too many

dealers and e shake out is inevitable.

cturers of personal computers

sales.

approximately equal share of the UK market. Simon Pearce at the consultants, IDC-Europa, says: "By the end of the year, the IBM PC was being shipped in large volumes. It is difficult to say but on a month by month basis it probably has e 20 per cent to 25 per cent share of the market. Everyone elses's share has been static."

Price cut

Yet a month ago IBM cut the price of its PCs across Europe up to 20 per cent. Sbortly afterwards it began to allocate supplies to dealers —

and its own sales force apparantly — because of shortage.

There has been much speculation as why IBM would choose to cut prices just before introducing a form of rationing. One view is that IBM in common with a number of other major suppliers is keen to increas-the level of direct sales of per-

ppointed a distributor.

But competition for ACT is interest by large organisations, ecoming much tougher in the says IDC-Europa's Simon

But the shortage of IBM PCs in Britain is also attracting the numerous plug compatable and PC look-alikes. Earlier this month Compaq Computer, the leading supplier of PC compatable appropriate of PC compatable appropriate plug supplier plug supplier of PC compatable appropriate plug

with sales of \$111m in its first year.) It joins e number of others, including Columbia, Data Products, Eagle and Corona.

INTEGRATED

This month we give you a hand with integrated software.

This month's magazine includes a handy 14 page guide to integrated software. We explain what it is, how it helps the businessman and what software is available. We also check out the new touch screen Hewlett Packard computer and review two portables, the Grid Compass and the Sharp PC-5000. And we look at the business potential of six popular home computers. Computing

Plus lots more. All in May's Practical Computing.

Computer. Other U.S. combecoming much tougher in the panies with a strong or growing UK, particularly as IBM begins Pearce. market share in the UK are to put on the pressure. Last This Apple, DEC and Commodore. to put on the pressure. Last
year the two companies had an of the importance of personal

W. Germany seeking to close the gap

1979. As recently as 1982 VW took a DM 34m loss at its sub-

sidiary, as well as being forced to waive DM 100m of debt

Triumph however is now

tha home market to 10 per cent within a few years.

In eddition it is offering a

New system

IF WEST GERMANY is to shake off the presumed telecommunications business technological backwardness that is the nightmare of its with its computing division to relative them few sectors will provide a closer-watched mount a still more attack in planuers, then few sectors will provide a closer-watched testing ground than office automation.

The electronic office, with its interlocking array of digital switchboards, microcomputers, electronic type-writers and video screens, is fast arriving in the most powerful economy in Western Europe.

But as it does, and office workers adapt to new technologies, a now familiar fear has surfaced: that Germany for In Bonn all its pre-eminence in Europe, might be slipping irretrievebly behind Japan and, ebove all the U.S. in the advanced tech-nologies which will create wealth and jobs into the 21st

Not for nothing did the sector feature in the Government plan, unveiled in mid-March, to provide DM 3bn of State aid for bigh technology industries, above all in the data processing and microelectronics field. But close reading of the report suggests that not all is showing e new vitality. Last year's sales topped DM 2bn, and as the company stretches its product range it expects to be hack in profit for 1984.

The company is alming to sell the company is alming the company is almined the company is almined to company is almined to comp over 50,000 of its "Alphatronic" report suggests that not all is range of microcomputers this year. Coupled with its high performance TA 1600 office computers, Triumph-Adler is hoping to doubla its share of

It identifies the central weakness of West German industry in this field: micro or desktop computers, long-neglected by domestic manufacturers—and with glaring consequences.

More than half of the domestic market in such computers, with a price tag of DM 4,500 (\$1,730) or upwards comprehensive planning and organisation system, called "Fritz," specially tailored for the needs of senior executives, has been captured by just three U.S. manufacturers, Hewlett-Packard, Apple and Commodore, alone. The major West German producers, Triumph-Adler, holds as well as the "BITSY" screenoriented text system, which can-be linked to the new teletext

But in the two adjacent market segments, electronic typewriters and intermediate data technology, German pro-ducers heve a strong position, which increasingly is being used as a springboard. office equipment scene, through its wordprocessing and small computer systems. It is sim-

The two main home manufacturers of typewritars, Olympia and Triumph-Adler, have both had severe problems have both had severe problems in the past. Olympia, 51 per cent owned by the long troubled electrical group AEG. was slow adjusting to the shift from electromechanical to electronic technology, and in 1981 lost DM 113m.

computer systems. It is aiming to double its sales and create 10,000 new jobs over the next four years. Siemens, which leans instinctively towards large systems projects such as factory antomation, is also concentrating increasingly.

the sector.

But all agree that office equipment is an area where the small nimble company has major edvantages over heavier footed larger corporations, in grasping opportunities in a fast changing and highly com-petitive market. And this issue goes to the heart of the present self-questioning over Germany's ability to win back high-tech ground lost not only to the Americans and Japanese, but in some fields to the British and

Rightly or wrongly, Germany is not seen as friendly territory for the small outfit, for the aggressive entrepreneur with a good idea, but little capital of his own. Rather, the image the Germans themselves propagate nowerful economy, founded on thoroughness, but instinctive

cantion and orthodoxy as well, rhese latter qualities bave prown out of the economic miracle of the post war decades. They have belped endow the country with an imposing superstructure of massive banks and corporations. They bave, bowever, militated against risk taking, the conventional view runs.

In fact vecture capital funds

In fact, venture capital funds are now starting timidly to appear. Computer experts are beginning to break away on their own, setting up their own companies, especially in the software field. Another pointer to a new vitality is the sell-out success of a recent DM 300m service offered by the German micro - electronics application Nixdorf, the dynamic computer company built up by Herr Heinz Nixdorf, and which is floating off 20 per cent of its capital, is another growing force on the West German office equivalent scane, through

acres of newspaper articles on the issue of technological backwardness show, the country has woken up to the risk.
The combination of this new

awareness, the presence in Bonn of a Government commitadjusting to the shift from electromechanical to electronic technology, and in 1981 lost DM 113m.

Much the same has been true of Triumph Adler, which has given its parent Volkswagen no few troubles since the car group ecquired its control in since the car group ecquired its control in since the car and the systems of hureaucracy and the state, and the knowledge that huge increasingly on office automation, is also concentrating increasingly on office automation, from its natural starting of hureaucracy and the state, and the knowledge that huge increasingly on office automation, from its natural starting of hureaucracy and the state, and the knowledge that huge increasingly on office automation, from its natural starting of hureaucracy and the state, and the knowledge that huge increasingly on office automation, from its natural starting of hureaucracy and the knowledge that huge increasingly on office automation, from its natural starting of hureaucracy and the knowledge that huge increasingly on office automation, from its natural starting of hureaucracy and the knowledge that huge increasingly on office automation, from its natural starting office equipment, suggests that we can be also concentrating increasingly on office automation, from its natural starting of hureaucracy and the knowledge that huge increasingly on office automation, from its natural starting of hureaucracy and the knowledge that huge increasingly on office automation, from its natural starting of hureaucracy and the knowledge that huge increasingly on office automation, from its natural starting of hureaucracy and the knowledge that huge increasingly on office automation, from its natural starting of hureaucracy and the knowledge that huge increasingly on office automation, from its natural starting of hureaucracy and the knowledge that huge increasingly on office automation, from its natural starting of hureaucracy and the knowledge that huge increasingly on office automation. ted to rolling back the frontiers

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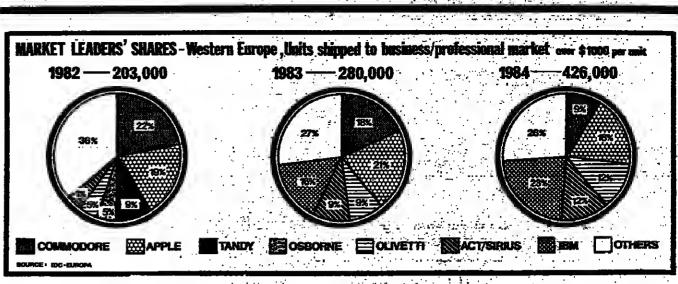
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THE DESK-TOP REVOLUTION 18



Italy: Olivetti anticipates big sales increase in late 1980s

Micro market lags behind

DESPITE the presence in Italy of Europe's leading data processing equipment company-Olivetti-the Italian market for desk-top microcomputers is still lagging a couple of years behind developments in other major industrialised European countries.

This is not surprising: Italy has traditionally been slower in nurturing new technologies than other countries such as West Germany and France. It also lacks a sufficient degree of expertise, trained personnel and the computer culture which is more advanced in other

On the other hand, the past two years have seen rapid growth in Italy'e personal computer market. The market is still relatively small — some 100,000 personal computers had been sold in Italy by the end of these conty. last month. Of these only around 30,000 to 35,000 desk-top models could be called pro-fessional. The others were for home use. That means that at an average price of L5m per professional model, total Italian sales to business users have been around L150bn (\$93m).

But the growth has been fast two years ago the number of desk-top computers sold in Italy was negligible. By the end of 1982 the total was around 30,000 (both home and professional).

At the end of last year the number sold had more than doubled to 70,000 and since the beginning of 1984 a further 30,000 have been sold, bringing

us to the current estimate of 100,000 machines.

Prospects

"It is a slow process now."
We have had very quick expansion in two years, but before we can resume this pace in Italy we must educate the businessmen and show them what automation can do. I what automation can do. I don't think we will see great opines one manufacturer of. personal computers.

While Italy does lag behind, ertain sectors of the economy

have been remarkably eager to

make use of personal com-puters. Prominent among these sectors are banking and insur-ance, retailing and other service industries. Giorgio Armani, the Milan-based fashion designer, is now using a personal computer to keep track placed an order to buy 1,000 in a network inside a company. Oilvetti M-24 personal computers. These will be used in is taking place among manufactory time and keep track of sales. And in Italy's standard for exchanging information in Germany."

But the real problem is build. Companies. What you in Italy, are different in a notward antomation. The local companies like Flat a companies will move fastest users. IBM, for example, is going to try to build up the leading-edge companies what you in Italy, are different companies. What you in Italy, are different companies. What you in Italy, are different companies. What you in Italy, are different companies. What you in Italy, are different companies. What you in Italy, are different companies. What you in Italy, are different companies.

BY ALAN FRIEDMAN

to clear a cheque and many minutes to get the attention of a dawdling clerk, personal com-· are increasingly.

Olivetti reckons that its share of the Italian market in personal computers last year was 35.9 per cent, a rather precise figure in a market where others are reluctant to hazard' a guess.

IBM is just behind Olivetti and then there is the traditional list of Apples, Commodores, and other well-known makers of personal computer fighting for a piece of the pie. From the UK, Act has recently signed an agreement to sell 2,000 of its Apricot models

By year-end, the total But what is the philosophy or expected to reach 150,000, of office automation in Italy? Few which some 40,000 will be protion to discuss this subject that Sig Elserino Piol. Olivetti's joint managing director in charge of strategy. Sig Piol products in Italy and AT & T first of all disdains the phrase has agreed to buy 100,000 office automation. Officetti work stations. For

> explains. Olivetti's view is that every white collar worker, from secreferies to managers, needs adequate information tools. The Olivetti version of such tools is posed of various components." ranging from a telephone and related communications equipment, electronic typewriters and personal computer to integrated terminals.

"There will in future be fewer layers of management. A: of orders and changes in design.

Fiat, the auto giant, recently placed an order to be a lower layers of management. A fatter management structure as a result," continues Sig Piol.

But the real model of the lower layers of management. A fatter management are layers of management. A fatter management are layers of management. A fatter management are layers of management. A fatter management are layers of management ar

But the real problem is built in Italy are different stage ing a network inside a company. in Italy are different stage in This is where the big battle antomation. The leading edge companies like Flat and Alitalia fastest but fewer

PERSONAL COMPUTERS IN EUROPE Country market shares-1983 (%), for personal

UK W. Germany Fram Digital (DEC) Hewlett Packard Total units Olivetti and Logabax in France.

phone & Telegraph (Olivetti's new global partner) will hulld standard for communica-

tions."

"One of the major reasons why we are in an alliance with AT & T." notes Sig Piol, "is the need to co-ordinate work stations and telecommunications. This is where Olivetti needs help." Last December AT & T paid U.S. \$260m to buy diffused the help." Last December at an option to buy up to 40 per behind in it cent in four years time).

Olivetti will market AT & T that in a full products in Italy and AT & T

"I don't like the words. I US\$200m this year, to be sold would prefer to talk about in the States."

Functions

Sig Piol claims that "the most ubiquitous work station will be a personal computer and a telephone." He says that for the next 10 computer retail outlets in 20 years the work station "several countries in Europe."

will be based largely, on these two components but a number of employees will still not take advantage of all the functions of a personal computer, he adds as a caveat. The sads will lead the market," com-How about the Italian ments Sig Piol.

will move fastest but fewer leading-edge companies in Italy are using personal computers

Sig Piel maintains that there exists no technological gap between Italy and the rest of the world (although a number of customers criticise Olivetti's as not offering adequate soft-

The gap is in quantitative terms. If you consider the market in terms of sales and how diffused the computers are, then we are two to three years behind in Italy."

Obvetti, however, reckons that in a few years there will the much increased seles in Italy. and in Europe. Sig Piol is looking for an average growth rate of 30 per cent a year his the late 1980s.

He notes that Olivetti is try-ing to strengthen its position in Europe, with a new line of personal computers, with the AT & T alliance and with plans for a chain-of Olivette personal

"We are strongly convinced that we can be number two in personal computers in Europe. We take it for granted that IBM

market?

"The real question in Italy Italian market is that professis for medium and large-sized Sional desk-top models will soon companies. What you find now begin to sell as well as home in Italy are different stages of models. Looking ahead, manuantomation. The leading-edge facturers hope that it will not companies like First and Alitalia tust, be the First Representation. just be the Fiats, Benettons, Montedisons, Alsa Romeos and banks which make serious use of personal computers. For the time being Italy remains behind.

Sweden launches subsidy plan to boost microprocessor sector.

Nordic suppliers confident

DESPITE THEIR relatively small size, Scandinavia's electronics manufacturers are controlled manufacturers are confident they will be able to hold their own against the giants on the increasingly competitive personal computer and office automation scene, partly because of their strong roots in the Nordic market.

By far the largest force in Nordic electronics is the LM

The Swedish market despite office automation products, as some U.S.\$600m, and broadentwell as bank electronics, post ing its market base in Swedentwe

the Nordic market.

By far the largest force in
Nordic electronics is the LM
Ericsson group. While its international standing is rooted in public telecommunications (it says its Axe digital switching system has a 13 per cent world market share) its hopes for future growth are pinned squarely on its information systems division.

The division, which covers integrated office automation. data processing and voice and data transmission, accounted for 30 per cent of total group sales of SKr 25.4bn in 1983. Already strong in the terminals business, the unit claims a 15 per cent European

market share with its Alfaskop

system. The system bas a 50 per cent market spread in Sweden, officials say.

Ericsson's 1983 sales growthEricsson recently introduced "The key words for the
an MD 110 Private Automatic
future are communications and

ing heavily in the bank automation sector, where it has an
specially strong position on highest densities per worker of annual electronics, sales in

A business version of this so-called system 2000 with soft-ware for bookkeeping, word processing and system control (among others) is being aimed at the large and medium-sized users, again mainly on the Nor-dic market but also to a lesser dic market but also to a lesser extent in Europe. The order book is filled and we are running at capacity," says Mr Rolf Ericsson, Ericsson Information Systems president.

Acquisition :

Branch Exchange (PABX) digital voice and data exchange after very heavy development costs. Despite a slow start, it is confidently predicting it will secure "a large chunk" of a total world market estimated at U.S.\$3.60n. The system will be marketed in North America by Honeywell, after a recent agreement.

Ericsson has been concentrating heavily in the bank automation sector, where it has an expectable extent of the processing and information information in the rest of the processing and information. Sweden's overall electronics line almed mainly at domestic output, SKr 50bn last year, government and industrial made up over 70 per cent of the lowers and to a lesser extent similar users in the rest of Scandinavia.

Exploiting its experience in output, SKr 50bn last year, government and industrial made up over 70 per cent of the lowers and to a lesser extent similar users in the rest of Scandinavia.

Exploiting its experience in output, SKr 50bn last year, government and industrial made up over 70 per cent of the lowers in the rest of secure "a large chunk" of a total world market estimated at user force is Nokia, the industrial it has had particular success conglomerate which is Finland's with its Notice software pack-large privately held company, ages. The group's international growth is rooted mainly in the formerity state owned scientific and research-related approaches the congruence of its hardware design specially state owned scientific and research-related processing and information processing and information by the data processing and information information in the part of an office automation and industrial made up over 70 per cent of the lowers and industrial made up over 70 per cent of the lowers and industrial made up over 70 per cent of the lowers and industrial made up over 70 per cent of the lowers and industrial made up over 70 per cent of the lowers and industrial made up over 70 per cent of the lowers and industrial made up over 70 per cent of the lowers and industrial made up over 70 per cent

background of similiar but larger programmes in Britain, West Germany, Italy and

France.
The development aid-directed malely at HAFCO and The group's acquisiton last ring purpose-built rather than data processing market particularly for banks. The world market for speciality typewriters and minicomputers, was behind fully 10 per cent of Ericsson's 1983 sales growth. The key words for the form the future are communications and ergonomics," says Mr Ericsson.

The move is set against the focused mainly on the North ackground of similar but region It claims a 45 per cent ager programmes in Britain, market share in Sweden with its microcomputer, mainly in-tended for small and medium At home in Finland it says

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Mr Paul Strassmann Vice President Systems Group, Rank Xerox Corporation.

Mr Elserino Piol Director Strategy and Corporate Development, Ing C,

Olivetti & C, SpA. Mr Hirokazu Negishi

Senior Research Scientist,

President, ITT Dialcom, Inc.

Mr Robert Ryan

Mr Michael O'Connor

The Central Computer and Telecommunications Agency.

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Micro-mania hits France

TAKE a market in full growth after several years of lagging behind other European countries. Add the presence of all the major American multinationals, a string of government campaigns to boost product penetration, plus still-powerful influences from domestic manufacturers in certain areas—and you have a certain areas—and you have a picture of the French market for office data processing and more often than not described as a "jungle."

-483 Mg.

> Eighteen months after microcomputer mania first hit the U.S., France last year was caught up in the craze for information technology which

> swept through Europe.
> Although the popularity of computers in the bome and the spread of retailing networks remain significantly lower than in Britain and West Germany, growth rates in the industry are comparable with the surge in demand recorded elswhere. Last year 200,000 "family" computers and 80,000 professional micros were sold in France—more than the cumulative total of all the preceding wears.

With the IBM personal computer, launched in Europe at the start of the year, selling less well in France than in other countries, other professional micro-electronics manufacturers —for the moment at least—are holding their own in France against the world's dominant computer company.

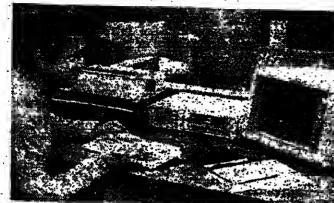
Bidding .

Apple, for instance, though bard-hit worldwide by IBM's PC, sold 30,000 units in France last year against an estimated 7,000 to 8,000 for the newly-introduced IBM model.

IBM, whose French subsidiary has double the turnover of Bull, the nationalised French com-puter group, bolds 50 per cent of the oversil domestic com-puter market, and has been bidding strongly—as elsewhere in Europe—to break into tele-

communications. But in the personal computer business, IBM in France has yet to assert its customary dominance over the market although that step may take place this year as the U.S. multinational brings its French sales network more fully into opera-

Bull, the perpetual No. two in the domestic race with IBM.



In the personal computer sector, IBM in France has yet to assert its customary dominance over the market. Seen here is the IBM PCIr equipped with disketts drive and disk operating system 2.1 in use at home.

ing presence in France) hava

ponents in order to increase tha "Frenchness" of ther products.

Foreign computer makers are clearly taking a leaf out of

IBM's book in confirming their

intention to play a direct domestic role rather than

simply supplying the market with imports. IBM, with its four

French: plants, two research laboratories, FFr 28bn in turn-

over-and tax payments which

make the company France's largest taxpayer—has made

itself an indispensable economic

partnar for the French Govern-

ment. Similarly, smaller Britisb

companies active in the home and educational computer business—led by Sinclair, Acorn and Oric—have found that the French market can be extremely

welcoming provided the right

domestic partners can be found.

Acorn, for instance, has explored teaming up with

in spite of years of government support, still claims to he in turned over FFr I 80bn in 1983. Other hig U.S. companies present in France—including with a chance of tweaking the gient's nosa in fast-moving mar-Digital Equipment, Burroughs and Hewlett Packard—have anstems nose in rest-moving markets for computerised business information systems. Pointing to its integrated office data processing and communications systems, Scribe, being installed for the French Finance Ministry M Jacques Stern, the Built nounced improved French results for 1983 and have stepped up their commitment to the domestic market. stry, M. Jacques Stern, the Bull president, says that even IBM has been caught out over the past few years in its strategy for matching computers with telecommunications. And he Purchases Digital Equipment, for example, is spending FFr 200m building a production plant at Valbonne in the south of Trance; Hewlett Packard, along says the paca of market changa gives smaller rivals a chance to with Wang and Apple (the latter two have no manufactur-

secure strong positions in specialised slots. With IBM standards clearly amounced they are making holding the data processing more purchases of French comsector in sway, no company active in France hopes to do more than simply carve out niches in the market. But they can be profitable for all that, as small specialised micro-computer companies such as computer companies such as Goupil, Leanord. (owned by Creusot Loire) and Logabax (majority-owned by Olivetti after its cash crisis-induced re-structuring in 1981) have shown

over the past year or so. All the hardware companies, as well as France's computer service groups, which are among Europe's leaders in this field, have drawn benefits from an information technology market estimated to have grown by 20 to 25 per cent to FFr 40bn last year. Information technology is

easily the most buoyant part of France's overall electronics and electrical sector which, according to the industry's federation.

Thomson—which makes what is for the moment France's most successful small microcomputer, the TO7-for an assault on the schools sector. The Government at the end of last year unveiled plans to boost the number of schools computers to 100,000 by 1988. The number at present is an embarrassingly modest 11,000 or so—and the Govern-ment has promised tenders will be open to foreign as well as.

There have also been recent signs of a wind of change in France's traditionally protected market for computer equipment in Government administrations and nationalised companies. This follows a loosening of bureaucratic procurement pro-cedures set up during the 1970s to support Bull and other domestic suppliers.

French companies.

The Government now realises protectionist policies actually cost the taxpayer dearly—the celebrated affair of the Banque Nationale de Paris being forced to buy Bull rather than IBM equipment just after the 1981 change of government was a case in point — and impeded necessary adaptation to competition.

pater groups are turning ever more frequently to foreign collaboration agreements to boost their sales range. Leanord has teamed up with Thorn-EMI, Thomson with Thorn-EMI Thomson with Fortune and Eagle of the U.S. and Bull with Ridge and Convergent, also from Californai.

That might not please the industry purists who once insisted on the need for an all-French computer industry. But it is giving computing customers what they want -which is what the French Gov-

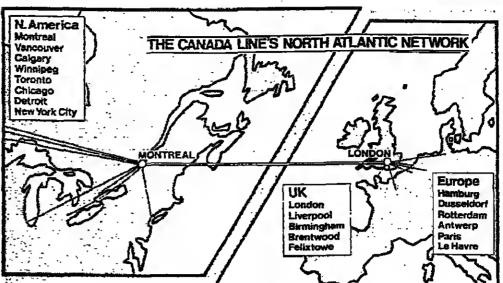
As a result, domestic com-

PERSONAL COMPUTER MANUFACTURER REVENUES

ernment now seems to want too.

Western Europe business/ professional sector: figures in \$m

726
1,063 .
1,448
. 1,881
2,376
2,955
3,623



CASE STUDY: CANADA LINE

More efficient network

AST YEAR the chairman of Canadian Pacific Steamships, Harvey Romoff, saved his company a lot on postage - be sent his Christmas card to staff by

electronic mail. Four bundred employees 2t 24 nffices, in seven countries read their boss's Yuletide greetings on their desk-top screens. He had even drawn a little Christmas tree complete with

flashing lights. His graphic attempts were made possible by the freight-carrier's north Atlantic computer network that provides a range of office automation facilities like word processing, spread sheets, financial modelling, graphics, traditional trans-action processing and electronic mail. The company is now called The Canada Line after a merger this January with the Dartcan interests of Maritime Belge. It has an annual turnover of C\$200m and offices in the UK, the U.S., Canada, Bel-ginm, the Netherlands, France

and Germany.
Its business is to ship containers across the north Atlantic. It demands good communication and administrative efficiency; a mis-directed telex can in the worst instance steer a batch of containers to the wrong country. Good communi-cations saves money.

In 1981 the directors realised they had to improve their net-work which relied heavily on the telephone, telex and a mainframe computer for batch pro-cessing. Board members were also frustrated by the lack of accomation" packages are little information available to them more than upgraded word

which made their decision making difficult. They employed Graham Brown, now a consultant, to improve their efficiency.

"When I went to CP Ships one of the first things people said to me was: 'We're putting all this information into the

computer but we can't get it He formed a team of four people to create a new system. An analysis of the company showed that it was communications intensive but it lacked a good communications network. Telephones, for instance, are not the best tool if Hamburg

wants to talk to Toronto, 10 hours behind. At the time the traditional method of computerising a company was to get machines to do the manual work faster. "I took the view that flowcharting the current procedures only belped embaim the existing organisation and methods in electronic aspic," says Mr

Objectives

He set out to identify which corporate objectives could ba helped by an information system. In this way the configurawith the company philosophy, instead of the reverse which is often the case when systems are

His attitude also showed that word processing was not important to the company. As many manufacturers' "office actomation" packages are little

later choice of supplier.

To introduce his ideas and the forthcoming system to the staff, Mr Brown set off on a tour of the company's offices:
"I went there to see and to be seen; you can't do analysis sitting in an office.

"It's important to talk to the people doing the work and find out what they want from a system. I was also trying to merchandise the benefits and stamp a few ideas into their minds. We didn't talk about technology, just communica-

From his visits emerged an implementation strategy and he chose to install electronic mail first, because be says it gives people a sense of belonging to a larger group. The data and word processing functions can be added later.

While Mr Brown travelling, two team members were looking at equipment and suppliers, "Traditionally you choose kit, baving based your decision on detailed technical evaluations before running a final check on the reputation, financial stability and engineer-ing organisation of the vendor. We did it differently."

The team produced a rough list of office automation vendors able to offer service back-up in the company's offices. To prevent the traditional mistake of providing a solution before finding the problem, the team worked out the software requirements before looking at packages on offer, Mr Brown wanted to keep the

project simple and sought a single source for both hardward and software — an attitude criticised by many consultants.
"But it saves finger-pointing

when things don't run according to plan," says Mr Brown. The list of suppliers was fur-ther shortened after initial contractual discussions and after their financial credibility had been checked. Mr Brown also insisted that they share his view of the system and were able to demonstrate the equip-

ment using bis data. "In the end you're buying a company, not this particular product. You want to know that it'll be around long enough to support the system and upgrade

"I think there is one fundamental truth to obey wheo huy-ing equipment: the supplier has accept this, then, with the speed of technological change, the kit you buy is inevitably going to be obsolete."

He also insists on a trial working period — for which you pay—with your chosen product. This is based on the experience of having to cancel his original order because the well-known supplier failed to give the neces-

Such decisions are extremely difficult, and fear of ridicule often forces people to stick with a system they know is wrong, Mr Brown emphasises the need for a mature manager to be in charge of the operation,

Justified

Hewlett Packard finally won the order which was then worth about £100,000 and has since risen to over £1m. They sup-plied three HP 3000 mini comnuters; 70 HP 125 personal computers, and 90 HP 26/24b terminals which were distrihuted to the different offices.

The network bas justified telf. North American telecommunications costs are down 66 per cent, which is worth about C\$100,000. And the volume of traffic is up. Trans-portation husinesses expect to spend li per cent of revenue on information systems. The Canada Line spends 1 per cent.

Personal computers have been integrated into the network in-stead of threatening to break it up. The transmission of the access to data is crisper since, subject to control, the system is accessible from any terminal. In fact, one excutive has swapped his fruitbowl in the dining room for a terminal. He is now in contact with the business at all times. Some execu-tives, of course, prefer fruit.

Peter Knight



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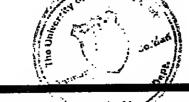
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The contest to capture the personal computer market has begun in earnest

Two main rivals jockey for lead position

BY ALAN CANE

So Apple has to justify its

Jobs and Apple co-founder Stephen Wozniak designed and built their first machine in a

rented garage, excited that they

intimidated by computers or by 400-page manuals."

leaned heavily on the ideas of a group of researchers based at the Xerox Palo Alto research

Lisa, and now Macintosh.

aboratories.

in recent years.

THE "desktop revolution" began in earnest when large companies bought professional personal computers in massive numbers.

In 1982, for example, Connecticut Mutual Life Insurance Company, a U.S. blue chip insurance company boasting \$6.5bn in assets, ordered 1,000 IBM PCs as the basis of its operations and sales information system.

It was a massive order for what was at that time, a very

But the habit was clearly catching. Within weeks of the launch of Apple's "Macintosh" desk top computer, the leading faith in its view of the office of accountants Peat, Marwick, Mitchell and Company had placed orders for 3,500 of the contemporaried declaration. controversial devices. And with 40,000 Macintoshes sold in the first 60 days after launch, there is no reason to doubt Apple chairman Steven Jobs' com-plaint: "Demand at present is plaint: "Demand at present is could cram an entire computer everal times more than the number we can make."

And it has to, if Apple is to could be owned by ordinary named. several times more than the number we can make."

live up to its reputation as the people.
only company which will be "Out only company which will be able to live with IBM in the personal computer market. At earlier this month. "We are a Financial Times conference still concerned with the interlast year, for example, Ms Jean action between the user and Yates of Yates Ventures, a U.S. based personal computing con-sultancy predicted: "The hard-ware winners will be Apple, facture-orientated vendors, and perhaps one innovative, major data processing shop which is able to make the transition."

Analysis

It is an analysis with which Mr Jobs agrees. IBM to have around 20 to 30 per cent of the total market and Apple to bave about the same,"

So the pure strain of Apples,
Now Apple can claim credit the Apple II, IIe and so on, for starting the personal com-puter, and therefore the desktop revolution, but these days to achieve and maintain that share against the marketing muscle of IBM would be a considerable

It suffered badly in 1983
When despite doing over \$1bn
worth of business it lost market
share beavily to IBM. Its Apple
III and Lisa computers bave
never fulfilled their promise
and it has seemed increasingly
a one product wonder.

It was they who first came
tup with the idea of little pictures or "icons" on the screen
to represent activities—a filing
cabinet to file memos, for
example, they who first thought
of picturing the executive's desk
as a series of simultaneous
table of the pictures of the screen
the pictures of the screen
the pictures of the screen
to represent activities—a filing
the lines of the "store-within-astore" concept, In the UK, for
example, Apple's managing
director Peter Cobb is already
as a series of simultaneous
table of the pictures of the screen
to represent activities—a filing
the lines of the "store-within-astore" concept, In the UK, for
example, Apple's managing
director Peter Cobb is already a one product wonder.

"windows" on the screen. They who first developed the rollers with a button on the top which could be moved around on the desk top to move a pointer on the computer screen. What has Apple added to the Xerox concept? "We figured out the best way to implement these techniques," says Mr Jobs. "The interface we have built

between the user and the com-puter is better. We were able to stand on Xerox' shoulders and see a little further." In the immediate future, Mr Jobs sees two principal areas for Apple to address, with IBM as its principal competitor in

• First, the market for sophis-ticated machines costing up to \$1,500—chiefly tha high end home market and the educa-tional market from kindergarten to age 12 or so.

Apple offers the Apple II in its various forms for this mar-ket, the IBM reply is the PCjr, machine still not available in

"Our ideas haven't changed at all," Mr Jobs sald in London earlier this month. "We are still concerned with the interthis country. But the PCjr is, by all accounts, doing badly. It is likely to be revemped and relaunched. According to Mr our computer."
"When you consider that Jobs, IBM erred in limiting the mobody in personal computers capabilities of the machine so that more than about 5 per cent that it could not be used as of their possible market you can a true home-and-office link and see that we have not ceally made a dent yet." of educational software avail-able in a form which could The market he is anxious to

address is the majority of people run on the machine.
who are either afraid of com- The second area, puters or have no time or machines costing up to \$3,000, inclination to work through is the electronic office—product is an analysis with which
Jobs agrees.

In the future I would expect
M to have around 20 to 30 to us that people could be pete directly with the IBM PC and its clones. It has to be said that the level of innovation built into Macintosh will be of the Apple II, He and so on, instant appeal in an educational gave way to the new hybrids, environment in comparison with the staid and orthodox

Both of these machines PC. Mr Jobs sees two factors as critical for success in personal computer markets in the futurel



Apple chairman Mr Steven Jobs—"demand . . . several times more than the number we can make."

that software companies will not

of software now being written for Mackintosh is the fact that an upgraded version of Lotus
Developments "Symphony"
program will be available later
in the year.

Best selling

Symphony is the latest from the writers of the best selling 1-2-3 package which started the trend to integrated software. MacSymphony (to coin a title) is likely to combine spread-sheet, word processing, graphics, communications, data base management and graphical input as well as output.

What does Mr Jobs predict for the future? Certainly port-ability—"We'll put Mac in a book," an echo of the old Xerox "Dynabook" concept of a paper back sized machine ited for business or educa tional use.

There will certainly be move towards flat screens and to desktop machines which combine computing and voice telephony. pects to announce an innovative

● Second, software, "Without laser printer for the office.
the software, you are dead," Colour for Macintosh comsays Mr Jobs, acknowledging puters is further off. The choice at the moment is between high definition black and white and be prepared to allocate re-sources to projects destined for computer manufacturers who for the £2,000 or so Macintosh might not be in business in a costs, Apple settled for black and white: "We could do colour today, but it would cost \$10,000," Mr Jobs grins.

The company already designs several of its own integrated circuits and is beginning to look at microprocessor design. "The Inmos transpoter is a very interesting device—it is along the right lines," Mr Jobs

And there is already a new maturity, due in part to the settling quality of ex-Pepsi Cola chief, Mr John Sculley, who took over as president and chief executive a couple of years ago, partly due to the company's confidence in its projected \$200m investments in rearch, development and mar-

Mr Jobs believes that the telephone is still the only machine to have a natural home on the desk—"We are out to make the computer the second desk-top machine," he says. But the fact is that this am-bition will only be realised by Apple and not IBM if it can convince the world that Macintosh is the way of the

Few managements seem ready to accept automation without some cost justification

Savings hard to identify

BY ALAN CANE

\$5,000 per office worker on

that adds up to a potential of

devices will be installed.

By 1985, according to
analysis of 1,400 manufactur

Sun shining

companies 100 per cent of scre-turies will have workstations, 96 per cent of professionals, 70 per cept of departmental

sble to provide products— chiefly in the form of the desk-

top computer which can pro-vide the functions needed in

ness lies in diffuse decision making and with old methods

of justifying costs which no

longer apply.

Now for a surprise. The poor,

derided user (department or individual) is by no means as ignorant of the value of new

technology as commonly sup-posed. Eosis found: "In a study

of the installation of 100 pieces

of office automation equipment.

office automation management

in only 26 per cent of cases. In

60 per cent of cases it was the user who started the ball

the application was identified by

ds and 13 per cent of

WHEN discussing plans to acquire new technology, managers generally say that the introduction can go ahead if significant staff savings or gains in productivity will result.

'In practice, such hard justifications are rerely

Ms Emma Bird, a senior con-sultant with the electronic office specialist Eosis, makes these points in the course of a research study into decision making in office automation. Her conclusions are echoed by the interim results of the UK Government's £5m sponsored

office automation trials programme, which were made and data processing terminals public at a conference late last will triple from 7m to 22m in the next five years and that by According to the speakers, the 1985 some 27m electronic office move to automated systems for the 21 organisations participating in the programme proved "harder, far harder, than vendor promotion had led them to believe. Increased efficiencies and cost savings have been diffi-cult to quantify to date. Unexpected problems have been en-countered. Difficulties and dis-

appointments abound."
So it is perhaps not surprising, as another Fosis study* incicates, that UK management is being slow to develop sophisticated cated uses for office automation.

The Eosis research team dedifferent business sectors on the sun seems to be thining their advancement in new tech- at last on the office suppression.

The results showed that pro- What of Europe and, in par-fessional services scored most ticular, the UK? highly for advanced use of office. The Eosis study shows that automation followed closely by distribution. Central govern companies have installed Emitted ment and local government were at the bottom of the list. Because information tech-nology trends in Europe tend to

lag a couple of years or more is not edvanced or intensive. It behind those in the U.S., it is concludes that the British slow-worth examining the American ness lies in diffuse decision situation. Survey results published by consultants Frost and Sullivan indicate that over half the U.S. companies they questioned had developed a strategy for office automation: "This strategy might be likened to a technica planning approach but there is some plan in place . . . a consistent pattern is emerging and that is that the financial indus-

tries and the insurance industries are showing a keen

awareness of the effects of office automation." The Frost & Sullivan report** rolling. executive or board level, in 34 per cent of cases from office automation management and in only 2 per cent of cases from

the user department."

So bow is the user to justify funds spent on office auto mation? It depends on the size of company, Eosis found. All companies agreed that the chief. instification is bound up with offering support to a key func-

tion—word processing in a typing pool, for example, or proposal calculation and print. ing in an insurance office. After that it was clear that maller firms needed better justification in terms of cost savings than the bigger com-panies, many of whom were buying equipment with the chief aim of gaining practical experi-

The results of the UK Govern ment trials suggest that true cost savings will be hard to identify.

lentify. Mr Cliff Hudson, of British Rail Engineering, which used equipment supplied by Information Technology, said: "If you are after savings in a conventional sense, then you are on to that management should view automation as a way of generating wealth rather than cutting

costs.

Mr Sam Badcliffe of the Greater London Council (Rank Xerox) said automated systems should be seen in terms of value added benefits. It had not seen

any real savings.
On the other hand, officials at Cambridgeshire County Council using IBM equipment mainautomation including tained that in every department where an office system had been installed there was a subsequent Yet in most cases the use cost justification to introduce more equipment.

So it seems that for those who can afford it—or who can take part in Government trials— hands-on experience can help in which office automation can improve business effectiveness But cost-justification will remain a problem for the small company with limited resources.
Perhaps, suggests Ms Bird of
Eosis, manufacturers and
retailers should consider renting or lessing equipment on favourable terms to small companies to their mutual benefit.

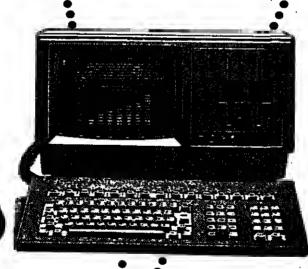
Marketing IT to UK-Businesses, Eosis, Farnham Com-

mon, Slough, £50.
**The U.S. professional executive workstations market, Frost future—and most industry also suggests that over the next "But authorisation for expendence of the U.S. professional execution and the control of the contro

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